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ALTERNATIVE TARGETS FOR MONETARY POLICY

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HEARING

BEFORE THE

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

OF THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS HOUSE OF REPRESENTATIVES

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CONTENTS

STATEMENTS

	Page
Friedman, Benjamin M., professor of economics, Harvard University	19
McKinney, George W., Jr., Virginia Bankers Association, professor of bank management, McIntire School of Commerce, University of Virginia	9
Paulus, John D., vice president and economist, Goldman, Sachs & Co	36

ADDITIONAL MATERIAL SUBMITTED FOR INCLUSION IN THE RECORD

Fauntroy, Chairman Walter E., opening statement	4
Friedman, Benjamin M., prepared statement entitled "A Credit Target for Monetary Policy"	23
"Interest Rates and Economic Activity," statement of Edward T. Renshaw, department of economics, State University of New York at Albany	103
McKinney, George W., Jr., prepared statement	13
National Association of Realtors, statement of Dr. Jack Carlson, executive vice president and chief economist	72
Paulus, John D., prepared statement	40

HEARING ON ALTERNATIVE TARGETS FOR MONETARY POLICY

WEDNESDAY, JULY 14, 1982

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY,
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:15 a.m.; Hon. Walter E. Fauntroy (chairman of the subcommittee) presiding.

Present: Representatives Fauntroy, Neal, Patman, Hansen, Lowery, Weber, and James Coyne.

Chairman FAUNTROY. The subcommittee will come to order.

This morning we hold hearings on one of the central questions of monetary policy: First, what target should monetary policy seek to achieve; and second, what indicators should be relied upon to ascertain that monetary policy is or is not meeting the targets. These hearings will also help us prepare for the full committee's hearings next week on the conduct of monetary policy.

Under the Humphrey-Hawkins Full Employment and Balanced Growth Act, the Federal Open Market Committee of the Board of Governors of the Federal Reserve System is directed to report to Congress each year on its goals for growth in the monetary and credit targets to attain the objectives of full employment and balanced growth. The FOMC has determined that the most appropriate targets are the monetary aggregates, which it classifies as M_1, M_2, and M_3, and especially the M_1 aggregate. When the Federal Reserve Chairman, Paul Volcker, testifies before the House Banking Committee next week, he will again make a presentation in terms of the FOMC proposals and plans for the growth of these aggregates, with the focus being upon M_1. Before congressional attention focuses exclusively on whether the actual growth rate of M_1 is too fast or too slow, however, it is important to ask whether this attention to M_1 is appropriate and whether there are alternatives that would more effectively and efficiently serve as targets for Federal Reserve monetary policy actions.

A monetary policy target is, after all, a device for achieving larger macroeconomic objectives of employment, growth, and reduced inflation. There is no intrinsic significance to the M_1 aggregate and whether or not the Fed achieves a targeted growth rate in that aggregate unless there is a predictable and stable relationship between the growth of that aggregate and the growth of the economy and the rate of inflation. Indeed, if there is no relationship, an unstable one, or even an inverse relationship, achievement of an

M_1 target might have perverse results for achievement of the larger and more basic objectives. The operation could be a technical success, but the patient might die.

It is important to raise this issue now because there is growing evidence that the relationship between M_1 and nominal GNP, which has been seen as being historically stable and predictable, is becoming more uncertain because of changes in financial markets and people's use of money and credit. Last year, for example, the Federal Reserve concluded that people's shift of funds from checking accounts into equally liquid money market mutual funds counted in M_2 was depressing the demand for M_1 growth by 1 to 4 percent. Consequently, the FOMC tolerated a growth rate for M_1 below its initial target. This year the Fed believes that there is an increasing usage of the NOW accounts in M_1 for savings purposes and that this is artificially increasing the growth rate of M_1. In both cases, the Fed has felt compelled to reinterpret nominal growth rates for M_1 in order to achieve "true" targeted growth for that aggregate as properly constituted.

It is of course possible that the Fed was fundamentally mistaken in its reinterpretations and that measured M_1 is still maintaining its historical relationship to nominal GNP. However, the fact is that the relationship has changed significantly at least in the recent past, during the 1974–75 recession, and that similar shifts may well be occurring now. Moreover, the growth of NOW accounts, money market mutual funds, and other instruments that have the characteristics of both transactions and savings balances suggest that, if the Fed has been wrong in its re-estimates of true M_1 growth, it has been wrong only in magnitude, not in direction. If that is true, such reinterpretations to prevent perverse results raise serious questions about the wisdom of continuing to target that aggregate.

One solution is to give the Federal Reserve the authority to distinguish what is a transaction balance from what is a savings balance, and to control the former. That is a solution which the subcommittee has already examined, and which it may want to adopt. Another solution may be for the Federal Reserve to adopt as targets, money or credit aggregates that have a more stable relationship to GNP.

Indeed, if there were credit targets equal to or in place of monetary targets, the range of options pursued by the Federal Reserve in its monetary and credit policies might be able more appropriately to reflect past and prospective developments in employment, unemployment, production, investment, productivity, international trade, payments and prices. Less reliance upon a single set of economic indicators could also reduce the current excessive reactions to changes in the M_1 monetary aggregate by financial markets. In addition, tracing the flows of credit could conceivably enable the Fed to target its actions so that the impact of the necessary fight against inflation is not so burdensome upon the employment rate. Helpful as these kinds of mechanisms may be in enabling the Fed to do its job, I think it is important to note that changing the targets, moving toward contemporaneous reserve accounting, or changing any of the other operating procedures does not mean that

the administration is freed of its obligation to pursue a responsible fiscal policy.

Today we will hear from several economists who have studied this issue and reached some conclusions which may be of help to us.

[The full text of Chairman Fauntroy's opening statement follows:]

OPENING STATEMENT OF THE HONORABLE WALTER E. FAUNTROY
Chairman, Subcommittee on Domestic Monetary Policy
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS

Hearings on Alternative Targets for Monetary Policy

Wednesday, July 14, 1982 - 10:00 A. M.
2222 Rayburn House Office Building - Washington, D.C.

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The Subcommittee will come to order.

This morning we will hold hearings on one of the central questions of monetary policy:

- what targets should monetary policy seek to achieve; and,

- what indicators should be relied upon to ascertain that monetary policy is or is not meeting the targets.

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A monetary-policy target is, after all, a device for achieving larger macroeconomic objectives of employment, growth and reduced inflation. There is no intrinsic significance to the M1 aggregate and whether or not the Fed achieves a targeted growth rate in that aggregate unless there is a predictable and stable relationship between the growth of that aggregate and the growth of the economy and the rate of inflation. Indeed, if there is no relationship, an unstable one, or even an inverse relationship, achievement of an M1 target might have perverse results for achievement of the larger and more basic objectives. The operation could be a technical success, but the patient might die.

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It is of course possible that the Fed was fundamentally mistaken in its re-interpretations and that measured M1 is still maintaining its historical relationship to nominal GNP. However, the fact is that the relationship has changed significantly at least once in the recent past, during the 1974-75 recession, and that similar shifts may well be occurring now. Moreover, the growth of NOW accounts, money market mutual funds, and other instruments that have the characteristics of both transaction and savings balances suggests that, if the Fed has been wrong in its re-estimates of "true" M1 growth, it has been wrong only in magnitude, not in direction. If that is true, such re-interpretations to prevent perverse results raise serious questions about the wisdom of continuing to target that aggregate.

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Today we will hear from several economists who have studied this issue and reached some conclusions which may be helpful to us. Testifying will be Dr. George McKinney who has just recently retired from the Irving Trust Co. of New York and who is now a professor at the University of Virginia, Dr. Benjamin Friedman, Professor of Economics at Harvard University, who has previously testified before this Subcommittee and Dr. John Paulus, Vice-President and Economist of Goldman, Sachs and Co. Gentlemen, welcome. We are pleased to have you before us today.

Before we begin, however, I would like to recognize my friend and the distinquished Ranking Member of this Subcommittee, Mr. Hansen.

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Chairman FAUNTROY. Testifying today will be Dr. George McKinney, who has just recently retired from the Irving Trust Co. of New York and is now a professor at the University of Virginia; professor of economics at Harvard University Dr. Benjamin Friedman, who has previously testified before the subcommittee; and Dr. John Paulus, vice president and economist of the Goldman, Sachs & Co.

Gentlemen, welcome. We are pleased to have you before us today. And before you begin, I would like to recognize my friend and distinguished ranking member of the subcommittee, Mr. Hansen.

Mr. HANSEN. Thank you, Mr. Chairman. I do join you in welcoming these distinguished witnesses who have agreed to testify on a most important issue in the field of monetary policy.

As never before in recent economic history, the significance of the management of the money supply for price stability and economic growth is being recognized. Not equally obvious is the need for the kind of tools and gages that permit our money managers to diagnose our present condition and to implement chosen policies in the most effective manner.

There is considerable agreement that inflation is a monetary phenomenon brought about by excessive creation of money and credit in the past. There is considerable agreement also that unwinding inflation calls for a slowdown in the growth of the money supply.

But implementing such policy requires that we know what we mean by money. For a variety of reasons, its precise meaning has become blurred and the question has been raised by a number of experts, including present company, whether the present monetary aggregates, specifically M_1, have not outlived their usefulness as reliable guidelines for monetary policy.

Therefore, gentlemen, I am looking forward to your testimony with great interest. And thank you, Mr. Chairman.

Chairman FAUNTROY. Thank you.

I want to yield to our distinguished Mr. Neal from North Carolina.

Mr. NEAL. Thank you, Mr. Chairman.

I would like to thank the chairman for calling this hearing, and to welcome our witnesses. As you may know, I have sponsored legislation requiring the Federal Reserve to conduct monetary policy so as to maintain the stock of money within specified ranges. It has long seemed to me fairly obvious that reasonable restraint upon monetary growth is necessary to control inflation and to, as much as is possible, guarantee full employment, low and predictable interest rates.

It is also clear that the Federal Reserve's efforts to control the money supply are paying off in terms of lower inflation and that, though the administration is very fond of taking credit for lower inflation, there is no evidence that I can find anywhere of any kind that they have had anything whatsoever to do with it.

Nevertheless, the process of reducing inflation has been anything but smooth and painless. I think we should continue to examine promising techniques for improving the conduct of monetary policy, including the possibility of alternative targets.

Before we delve into the complexities of monetary targets, I would like to set out a few very basic and nontechnical observations on monetary policy. They seem to me to constitute a sound basis from which to examine its details, and I would be particularly interested to hear from our witnesses if they would like to comment or take issue with them.

The most basic point, I think, is that the public needs to know what the Federal Reserve is trying to do and how. I do not mean every day-to-day detail and I do not mean general statements that encompass every possible economic objective. I do mean a reasonably explicit statement of priorities among the possible objectives of monetary policy and a fairly explicit statement of what monetary policy can actually do over the medium term to achieve those objectives.

This requirement could be met by spelling out various kinds of money or credit targets and indicating how the Federal Reserve thinks those targets relate to ultimate objectives, be they inflation, employment, real growth, or whatever. This requirement cannot be satisfied if the Federal Reserve is granted complete discretion, divorced from any explicit targets or objectives.

Of course the Fed should enjoy considerable scope for shortrun flexibility and of course it should be able to change its targets if there is a good reason for doing so. But it should also have a fairly clear and coherent notion of what it is trying to achieve over the medium to long run.

I think we all recognize that monetary policy is a very potent tool of economic management, the ultimate consequences of which must be borne by the Congress, the administration, and the people of our country. So we have a right, indeed a duty, to demand that the Federal Reserve be held accountable to some standard.

The second point I want to make is that, despite the perplexing variety of possible standards, objectives, targets, or operating procedures, the Federal Reserve actually does only one thing: It determines, directly or indirectly, by design or by default, the rate of growth of the reserves of the banking system. It does not and cannot directly control money, credit, or interest rates. It can only try to influence those targets by forcing, inducing, or permitting faster or slower growth in bank reserves.

In the most fundamental sense, it matters not at all which target the Federal Reserve chooses, be it M_1, M_2, or any of the many possible credit aggregates or interest rates or whatever, and it matters not at all how that target is defined, so long as the target chosen induces the Fed to supply banks with the right amount of reserves, growing at the right rate.

Success or failure must be defined ultimately in terms of some final objective, such as inflation or real growth, not in terms of a monetary or credit target. Money or credit targets, or even interest rate targets, are useful only as more or less efficient guides to the ultimate objective.

And finally, Mr. Chairman, I think that there are several conclusions to be drawn from these observations. There is nothing sacred or eternal about any target or any definition of any target. We should not hesitate to redefine targets or shift target ranges when circumstances warrant. But one should beware of jumping to the

conclusion that financial innovations or developments in the real economy have rendered some familiar target obsolete or useless.

The question is always relative. It may be that all plausible targets have become less reliable in their relationship to ultimate objectives and more difficult for the Federal Reserve to control or influence. It might be that an old reliable target like M_1 is going through a temporarily volatile period. And finally, it may be that sticking to a more or less workable target is preferable in the long run to switching back and forth among different targets, always looking for the best, but causing only confusion and uncertainty.

For all these reasons, I think it is premature to jump to the conclusion that we need alternative targets to replace M_1. The search to find a better target could resemble a hide and seek game in the thicket of financial statistics. Nonetheless, we need to keep the issue under constant review, and I am eager to hear what our witnesses have to say.

And I thank you, Mr. Chairman.

Chairman FAUNTROY. Thank you, my colleague.

Mr. Patman?

Mr. PATMAN. I have just a few words. While the witnesses are discussing the monetary aggregates and the targets for those, I wish you would consider some of the side effects of the decisions that are made by the Fed on the M_1's, M_2's, and so forth, and whether it would not be wise to have the Fed issue at the time it changes its monetary policy its projections for the side effects, namely unemployment rates, bankruptcy rates, perhaps the ultimate flow of capital outside the United States when the interest rate is raised here and we attract foreign capital to the United States, and some of those things.

And of course, I suppose you will get to the root of the whole thing as to whether or not the Fed is in fact managing aggregates and money supplies or really watching primarily the rates of interest and seeing whether or not those go up or down and perhaps manipulating those up or down.

Second, I wish you would discuss what would happen if the Fed were abolished, to the management of money supply, interest rates, things of that nature.

Getting back to my first inquiry, if you would discuss with me what you think are the necessary side effects that the Fed must consider and how those are quantified and identified. I am speaking, of course, of when the Fed changes the monetary policy that it has been employing. At what point should we identify a change in the monetary policy, and then what are the results, aside from perhaps manipulation of the M_1, M_2 and so forth?

Specifically, I am thinking about a bill I have under consideration to require the Fed to issue an economic impact statement at the time it changes monetary policy, and given its projections, which I would think would be a necessary part of its analysis of the effects of its change in monetary policy. Some of the items I have mentioned already, interest rates, unemployment rates, bankruptcy rates, and any other factors you think would be relevant or necessarily a part of the decisionmaking process the Fed employs in determining just when, how, and to what extent it changes its monetary policy.

Thank you.

Chairman FAUNTROY. Gentlemen, as you see, there is great interest in the subject upon which you are about to testify, and we look forward now to your statements. We will hear first from Dr. George McKinney, professor at the University of Virginia, and former member of the Irving Trust Co. of New York.

STATEMENT OF GEORGE W. McKINNEY, JR., VIRGINIA BANKERS ASSOCIATION PROFESSOR OF BANK MANAGEMENT, McINTIRE SCHOOL OF COMMERCE, UNIVERSITY OF VIRGINIA

Mr. McKINNEY. Thank you, sir.

Mr. Chairman and members of the subcommittee, it is a pleasure to be here, and I thank you for the opportunity to comment on alternative targets for monetary policy. This is really a subject of major interest, and I think it is likely to become a more urgent topic within the next few years unless some changes that are needed are made.

I think this subcommittee is to be congratulated on bringing this subject up at this time, because it will take some time to select alternative targets and to implement the change. In my prepared statement, I examine in some detail whether the use of quantitative targets of any kind at all is appropriate, and I conclude rather negatively. However, in view of the voluminous number of words involved, I am sure you will not mind if I move down somewhat and skip that section—if you wish, we can go back to it—and instead address directly the questions you asked in your letter to the witnesses further down in my testimony.

These are the specific answers to those questions. First, what are the appropriate criteria for determining proper targets for monetary policy? Well, the quick answer to that, of course, is that it should be something that the Fed can do something about, and it should be something that has reliable impact on broad aggregates. But targets actually serve multiple purposes, regardless of what the stated objective of those targets may be, and one that this committee is particularly interested in is, the targets that may be intended for use as operating guidelines also are in fact used in evaluating the performance of the Federal Reserve. Unfortunately, this reduces the efficiency of those targets that otherwise might be more useful for operating purposes.

As to what I feel the specific criteria should be, first, I think that the use of targets ought to be result-oriented and not process-oriented. The Congress, the public, and this committee are rightly concerned with the results that the Federal Reserve obtains, but they are not necessarily concerned with how they are obtained, and they think it is an error to pay too much attention to that. Oversight hearings should determine whether inflation objectives and growth objectives should be met. They should not be sidetracked into wasting the valuable time of the Congress in discussing technical details of how the Federal Reserve accomplished what it did accomplish.

Second, I think that the targets should be considered in the broadest possible context. The overall economic performance must be the ultimate objective and I think that should be couched in

terms of inflation, employment, output, and sustained growth, but whatever overt targets are used by the Fed should come as close as possible to measuring those ultimate objectives, and should not be narrow, restrictive targets.

Third, the targets ought to be expressed in terms of the longest feasible time horizon. It is generally agreed that there is a long, variable, and unknown time lag between changes in monetary policy and the impact that it has on the economy. Therefore, the Federal Reserve should primarily and at all times have long-term objectives in mind. Even when its immediate objective is to counter short-term excesses or deficiencies in economic activities, the impact on longrun economic developments should not be ignored. Any target that focuses on the short run causes undue concern with week-to-week happenings, and my observation is that that is inevitably to the detriment of the Fed's long-term performance.

Fourth, operating targets should be flexible. Targets can be useful as a guide to the Federal Reserve in its day-to-day operations, but those targets lose much of that usefulness if they cannot be changed to meet changing circumstances. Operating targets should be susceptible to change by the Federal Reserve whenever in its judgment they need to be changed.

Fifth, operating targets should be shielded from public scrutiny, and I believe this is in specific answer to the question that was asked earlier. Operating targets should be shielded from public scrutiny. Market participants will react to whatever target the Federal Reserve uses if those participants know what the target is. By their very nature, operating targets are limited objectives, which have very little importance in their own right. If we focus market attention on some technical operating objectives, such as M_1, rather than on broad financial and economic considerations, it causes unnecessary volatility of interest rates and exchange rates, disruptive fluctuations of economic activity, and economically irrational use of the Nation's resources.

What are the consequences if inappropriate targets are used? Well, we can list them: increased volatility in interest rates and exchange rates, greater uncertainty in financial markets, higher interest rates to reflect that greater uncertainty, greater volatility of economic activity, frequent recessions, uneconomic utilization of national resources, higher average unemployment, greater risk of increased inflation. How well do M_1, M_2, and M_3 meet the criteria for these targets, for the proper targets? I think not well at all, particularly in the case of M_1. Almost any change in financial institutions, and there are plenty of changes in those institutions and practices these days, almost any change will affect the relationship between M_1 and overall financial and economic activity. The usefulness of the various M's, M_1, M_2, and M_3, as targets, varies from time to time.

As a whole, the monetary targets are broadly useful at a specific time, as in the past 3 years, when the only criterion has been fighting some secular problems such as chronic inflation or protracted deflation. They are not much good at times when finesse and judgment is important, when it is not clear that we should be all on one side or the other. Historically, each of the three monetary aggregates has done best at one time or another, depending on the

period chosen. In principle, the broader the aggregate, the more likely it is to be relevant in more different circumstances. However, all the M_1's are inferior in that they direct public attention to the technical mechanics of monetary policy and away from the pertinent issue of overall economic performance. I contend that they also cause deterioration in that overall performance. Are the present targets adequate, or should different aggregates or values be used? The present targets may be adequate under special circumstances, but no one target will suffice under all circumstances. Broader targets, such as nominal GNP, total liquid assets, nonfinancial debt, would be more flexible and would be more useful. Most important, the Federal Reserve should not be held to doctrinaire, rigid targeting procedures that are set in advance.

Question No. 3, what alternative targets should be used? Well, I am not meaning to chicken out here, because I think that the state of knowledge is not adequate. I would suggest that this subject be explored in depth. I think it needs to be examined by academia, by researchers, by the Congress, whatever. Likely candidates that seem to be usable are nominal gross national product, total liquid assets, total nonfinancial debt. Others, possibly including explicit reference to inflation, ought to be considered. Narrower targets, such as net borrowed reserves, can be quite useful as operating guidelines. However, they should not be displayed before the public, and the Federal Reserve should be free to shift those operating targets when it feels that it is useful to do so. What would be the advantages of these broader targets? The use of broader targets would shift the attention of the public, the Congress, the markets, and the Federal Reserve itself away from short term technical considerations. Broader targets would appropriately focus attention on more substantive issues and more important objectives. Therefore, the Federal Reserve would be more likely to achieve those broader objectives rather than to be tied down trying to figure out how to do what it was trying to accomplish.

Four, what would be the practical and administrative problems with such alternative targets? Nominal gross national product is clearly the best target. However, it runs into serious political problems. The Congress and the administration might be tempted to dictate what the targets were. There would be some problems of currency of data, measurement, collection of data for other desirable targets. But these problems would not be insurmountable.

Finally, how would you recommend that these problems be solved? I think the greatest contribution that Congress could make would be to de-emphasize the targeting procedures as such. Central banking is essentially a public interest function with a long term orientation. In contrast, holders of elective offices are constantly subjected to pressures and temptations based on shortrun considerations.

The Federal Reserve Act was originally passed so the Nation could have a central bank to pursue those long term objectives, with minimum consideration of shortrun interests. Thus, a principal objective which was well achieved in the Federal Reserve Act was to insulate the monetary policy function from shortrun pressures, to permit the Federal Reserve to function with maximum freedom from shortrun political intervention, and to permit the

Congress to provide for the longrun national well-being, even though it may at times conflict with the shortrun wishes of special interest constituencies.

The solution is to delegate a maximum shortrun policy flexibility to the Federal Reserve. The Congress should not specify shortrun operating procedures, even though it has a clear responsibility to delineate long-term objectives and to see that those objectives are met to the extent possible. The forward-looking approach that this subcommittee has taken in holding these hearings today, I think, offers considerable encouragement that real progress will be made toward that end.

I assume that I should defer any response to Mr. Patman's specific questions until later. Would that be correct?

[The prepared statement of Mr. McKinney follows:]

Prepared Statement by Dr. George W. McKinney, Jr.
Virginia Bankers Association Professor of Bank Management
McIntire School of Commerce, University of Virginia
before the U.S. House of Representatives
Subcommittee on Domestic Monetary Policy
of the Committee on Banking, Finance and Urban Affairs
July 14, 1982

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Mr. Chairman, Members of the Committee. I am George McKinney, Virginia Bankers Association Professor of Bank Management at the McIntire School of Commerce of the University of Virginia.

Thank you for the opportunity to comment on possible alternative targets for monetary policy. In my opinion, this is a subject of major significance. It will likely become a more urgent topic within the next few years unless needed changes are made. You are to be congratulated on bringing this subject to the fore now, since it will take some time to select alternative targets and to implement the change.

It may be useful to examine whether the use of quantitative targets of any kind is appropriate. As Chairman Fauntroy recently pointed out, "monetary aggregates have no intrinsic importance." They--or any other targets--are useful only to the extent that they help achieve the ultimate goals of balanced economic growth and minimum inflation.

The use of quantitative operating targets of the Federal Reserve as a means of supervising the results of the Federal Reserve's activities violates a basic principle of management supervision. Operating targets are only a means to an end; they relate to how the Federal Reserve proceeds, and not to what its objectives are or to whether the objectives are met satisfactorily. Anyone being supervised--including the Federal Reserve--should be held accountable for results and not for the way in which the results were achieved.

The Federal Reserve contends, persuasively, that it needs operating targets for internal use. Yet their usefulness is diminished by their concurrent use as a performance target. If the Federal Reserve is judged on whether money grows at X% this week and next, rather than on the rate of inflation or the level of unemployment, the incentive for it to concentrate on money growth is correspondingly greater. And the ultimate objectives of balanced economic growth with minimal inflation will suffer as a result.

At times, the use of monetary targets has been most successful. In the period since October 1979, monetary targeting has helped move toward the accomplishment of the nation's ultimate economic objectives. However, it is not likely that monetary targets will be equally useful under all circumstances in the future. Further, it is exceedingly clear that fine-tuning monetary targets, as is frequently proposed by some members of the Administration and by other monetarists, will prove to be increasingly inappropriate, and will run serious risk of substantial damage to the economy. The nation's financial mechanism is currently undergoing a veritable revolution, and simplistic monetarist rules lack the flexibility necessary to deal appropriately with such drastic change.

Since October 1979, when the Federal Reserve instituted a serious program of fighting inflation through the process of gradually and persistently slowing money growth, financial markets have been under pressure whenever credit growth threatened to become excessive. The price (interest rate) mechanism is once again effective in limiting speculative use of credit. Inflation has slowed markedly and is likely to continue to improve.

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For the past three years, when there was no doubt that appropriate Federal Reserve policy called for persistent restraint to fight inflation, any policy procedure that would deliver that persistent restraint was appropriate. Monetary targeting delivered the restraint during that period, and therefore was appropriate. It should be noted, however, that the principal advantage of monetary targeting at this time was its direct simplicity. Anyone can understand that less money implies less inflation; it's easy to go from that fact to the erroneous assumption that controlling money growth will control economic activity in the most propitious manner.

Monetary targeting does have the advantage of taking the heat off the Federal Reserve. Because the need for slower money growth during this period was so well understood, the public and the Congress were more willing to tolerate generally restrictive monetary policy in the post-1979 period. However, this coincidence of public perception and the real needs of monetary policy is limited to periods when there is unequivocal need for sustained restraint or for sustained stimulus. In more normal times, when the business cycle rather than secular inflation or secular deflation is the problem, there will be a need for flexible policies to minimize the short-term cyclical disturbances. The informed judgment of the professional central bankers at the Federal Reserve can provide the needed flexibility. Rigid monetary targets can not.

The case for money targeting leans heavily on the monetarist assumption that variations in velocity (the speed with which money moves from hand to hand) can safely be ignored in policy determination. In fact, the statistics do not bear out that thesis. Let's compare the half-dozen years in the mid-1970s, when inflation was accelerating very rapidly, with the quarter-century ending in 1978.

Throughout this period, as in most periods, velocity was more variable than was money growth. From 1953, quarter-to-quarter changes in velocity were 1.7 times as great as changes in money; after 1973, more than 2.6 times.

Further, average velocity does not remain constant and does not increase at a constant rate. Long-run changes in velocity are impressive (velocity has tripled in three decades). And the change is not, as the monetarist thesis requires, at a smooth pace. In early 1973, velocity took off like a rocket. Over the next five years, when inflation was increasing rapidly, velocity accelerated two-and-a-half times as fast as it did in the preceding seven years. In constrast, money growth accelerated only about 7%.

Thus, acceleration of velocity accounted for a much larger share of the increased inflation during the mid-1970s than did money growth. By my figures, the ratio was about 16 to 1.

Monetarist targeting focuses on money growth as the key policy variable, and thereby diverts our attention from factors that contributed 16 times as much to the inflation of the 1970s as did money growth. It's high time we started paying more attention to these other factors.

One key deficiency of money targeting is the fact that money doesn't hold still. A definition that is appropriate today, if we can find such a definition, would not have been appropriate yesterday and will not be appropriate tomorrow.

Thus the Federal Reserve must continuously re-evaluate the nature of money, and choose between two entirely unsatisfactory policy options: frequent re-definition of money, or continuously re-estimating the extent to which the existing definition is inappropriate. In the latter case arbitrary adjustments to targets must be made. I submit that monetary policy, a

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principal arm of macroeconomic policy, is too important to subjugate to rigid growth constraints of an aggregate that necessarily includes a substantial degree of arbitrary estimation.

Over the years, technological change has persistently broadened the range of things that are in fact used as money. First money was only coins, then it included bank notes, then bank deposits. If the National Banking Act, passed nearly 120 years ago, had included a money target, it would have been expressed in terms of currency and coin. The subsequent growth of deposits would have been outside of and in addition to the target, and thus would have been highly inflationary.

Similarly, much of the inflation in recent years was sparked by growth of new forms of money: credit cards, zero-balanced checking accounts, money market funds. Now the rapidly-developing "sweep accounts," that automatically transfer excess balances into interest bearing accounts, are bringing a change of unknown magnitude into current definitions of money. Unless money targets or money definitions make proper allowance for these changes, monetary targets practically guarantee an excessively expansionary or excessively restrictive policy. Since no one knows now how fast or how far these and similar new arrangements will develop, the odds are that any target selected in advance would prove in fact to be the wrong one.

Current pressures to fine-tune money growth, to force money to stay week by week in a narrow growth range, are exceedingly ill-conceived and would impose substantial damage on markets. They would intensify short-run economic fluctuations, and would make them more frequent.

Recent experience illustrates the dangers inherent in such fine-tuning. In 1980 and early 1981, the Federal Reserve was feeling its way into the new techniques adopted in 1979. Consequently, it tended to move too agressively to bring money growth back into the desired target path. The result was somewhat like a tug pushing on an ocean liner until it tilts, then rushing to the other side and pushing to get it back on an even keel. With money growth slower than was desired, the Federal Reserve would push to get it back in line. Interest rates would drop sharply, and money growth would accelerate, ultimately moving above the target growth path. Then the Federal Reserve would tighten strongly, interest rates would shoot up, money growth would slow and subsequently drop below targets. The result, excessive interest rate volatility, is what is to be expected on a continuing basis if a deliberate policy of fine-tuning money growth is adopted.

Fortunately, the Federal Reserve has learned from its experiences. Since mid-year 1981, it has been more tolerant of short-term deviation of money growth fm its stated target ranges. This more moderate approach has been reflected in relatively greater stability of interest rates.

The Federal Reserve started moving to an easier money policy last summer, just about the time the recession got under way. M1 growth was sluggish, and the Federal Reserve wanted to get it back on track. Policy eased progressively but moderately until near year-end, when money growth picked up again. That faster money growth, however, was concentrated in interest-bearing NOW accounts, apparently a build-up of precautionary balances held by individual depositors to guard against economic contingencies. This development was not a new one; in earlier recessions there has been a tendency for savings accounts to increase as unemployment rises. Apparently people want to have some money handy in case they're the next ones to be laid off during a recession.

Obviously, it is not appropriate for the Federal Reserve to insist on the same rate of growth of money for

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precautionary purposes as for spending purposes, and it appropriately chose to tolerate the faster growth. It would have served no useful purpose to slam on the credit brakes and force interest rates to much higher levels, which would have been the only alternative if a strict money-growth rule had been followed.

Visualize what would have happened if the Federal Reserve had tried to force money growth to stay in a narrower range throughout this period: Last fall, at a time when rates were already dropping from the 18% range to the 12% range, a fine-tuning policy would have called for aggressive ease. When money growth subsequently speeded up, and moved above targets (as it did anyway) fine-tuning would have required very aggressive tightening.

The result would have been more severe disruptions in financial markets, a much sharper decline in interest rates than actually occurred, a subsequent very sharp rise in rates to levels well above where they are now. There's no way that such a policy could have benefitted the economy. In fact, the higher interest rates would have caused a larger number of business failures, the uncertainties engendered by such extreme market instability would have caused other businessmen to cut back more sharply on their investment plans, and the recession would have been more severe. The prospects for recovery would be less favorable.

Thus, the flaws inherent in money targeting are sufficiently important to warrant an intensive search for the proper alternatives. Following are specific--and brief--answers to the specific questions you raised in your letter to me.

1) What are the appropriate criteria for determining proper targets for monetary policy?

It should be kept in mind that targets serve multiple purposes, regardless of what the stated purpose may be. Targets intended for use as operating guidelines will also be used in evaluating the performance of the Federal Reserve. Unfortunately, this tends to reduce the efficiency of targets that might otherwise be more useful for operating purposes.

a) The use of targets should be result-oriented, not process-oriented. The Congress and the public are properly concerned with the results the Federal Reserve obtains, rather than how they are obtained. Oversight hearings should ask whether inflation and growth objectives have been met. They should not be sidetracked into wasting the valuable time of the Congress in discussing technical details of how the central bank did what it did.

b) Targets should be considered in the broadest possible context. Overall economic preformance must be the ultimate objective, in terms of inflation, employment, output and sustained growth. Overt targets should come as close as possible to measuring those ultimate objectives.

c) Targets should be expressed in terms of the longest feasible time horizon. It is generally agreed that there is a long, variable, and unknown time lag between changes in monetary policy and its impact on the economy. Therefore, the Federal Reserve should always have long-term objectives in mind. Even when its immediate objective is to counter short-term excesses (or deficiencies) in economic activity, the impact on long-run economic developments should not be ignored. Targets that focus on the short-run can cause undue concern with week-to-week happenings, to the detriment of long-run performance.

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d) Operating targets should be flexible. Targets can be useful as a guide to the Federal Reserve in its day-to-day operations. However, targets lose much of that usefulness if they cannot be changed to meet changing circumstances. Operating targets should be susceptible to change by the Federal Reserve whenever, in its judgment, they need to be changed.

e) Operating targets should be shielded from public scrutiny. Market participants will react to whatever target the Federal Reserve uses, if they know what it is. By their very nature, operating targets are limited objectives, of little importance in their own right. To focus market attention on some technical operating objective, rather than on broad financial and economic considerations, tends to cause unnecessary volatility of interest rates and exchange rates, disruptive fluctuations of economic activity, and economically irrational use of the nation's resources.

What are the consequences if inappropriate targets are used? Increased volatility in interest and exchange rates, greater uncertainty in financial markets, higher interest rates because of the greater risk premiums. Greater volatility of economic activity, frequent recessions, uneconomic utilization of national resources. Higher average unemployment, greater risk of increased inflation.

2) How well do M1, M2 and M3 meet the criteria for proper targets?

Not well at all, particularly in the case of M1. Almost any change in finacial institutions and practices will affect the relationship between M1 and overall financial and economic activity. The usefulness of the various M's as targets varies from time to time. Monetary targets are broadly useful when the only criterion is fighting some secular problem such as chronic inflation or protracted deflation.

Historically, each of the monetary aggregates has done best at one time or another, depending on the period chosen. In principle, the broader the aggregate the more likely it is to be relevant in different circumstances. However, all the M's are inferior in that they direct public attention to the technical mechanics of monetary policy and away from the broader issue of overall economic performance.

Are the present targets adequate, or should different aggregates or values be used?

The present targets may be adequate under special circumstances, but no one target will suffice under all circumstances. Broader targets, such as nominal GNP, total liquid assets, nonfinancial debt would be more flexible and therefore more useful. Most important, the Federal Reserve should not be held to doctrinaire, rigid targeting procedures set in advance.

3) What alternative targets should be used?

This subject should be explored in depth. Likely candidates are nominal GNP, total liquid assets, total nonfinancial debt. Others, possibly including explicit reference to inflation, should be considered. Narrower targets can be useful as operating guidelines. However, the Federal Reserve should be free to shift operating targets whenever it seems useful to do so.

What would be the advantages of such targets?

The use of broader targets would shift the attention of the public, the Congress, the markets, and the Federal

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Reserve itself away from short-term, technical considerations. Broader targets would appropriately focus attention on more substantive issues and more important objectives. Therefore, the Federal Reserve would be more likely to achieve those broader objectives.

4) What would be the practical and administrative problems with such alternative targets?

Nominal GNP is clearly the best target. However, it runs into serious political problems: The Congress and the Administration might be tempted to dictate the targets. There would be some problems of current data, measurement, collection of data for other desirable targets, but these problems would not be insurmountable.

How would you recommend that these problems be solved?

The greatest contribution would be to de-emphasize the targeting procedure as such. Central banking is essentially a public interest function with a long-term orientation. In contrast, holders of elective offices are constantly subjected to pressures and temptations based on short-run considerations. The Federal Reserve Act was originally passed so the nation could have a central bank to pursue those long-term objectives with minimum consideration of short-run interests. Thus a principal objective, well achieved in the Federal Reserve Act, was to insulate the monetary policy function from short-run pressures, to permit the Federal Reserve to function with maximum freedom from short-run political intervention, and to permit the Congress to provide for the long-run national well-being even though it may at times conflict with the short-run wishes of special-interest constituencies.

The solution to these problems is to delegate maximum short-run policy flexibility to the Federal Reserve. The Congress should not specify short-run targeting procedures, even though it has a clear responsibility to delineate long-term objectives and to see that those objectives are met to the extent possible.

The forward-looking approach this Subcommittee has taken in holding these hearings today offers considerable encouragement that real progress will be made toward that end.

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Chairman FAUNTROY. Yes. We will hear each panelist, and then we will begin with those inquiries made by Mr. Patman.

We are very pleased to have Dr. Benjamin Friedman, who has been with us in previous hearings with his opinions on this and related subjects. Dr. Friedman, we are very pleased to have you again. We are prepared to receive your statement in whatever fashion you choose to present it.

STATEMENT OF BENJAMIN M. FRIEDMAN, PROFESSOR OF ECONOMICS, HARVARD UNIVERSITY

Mr. FRIEDMAN. Thank you, Mr. Chairman.

I am very pleased to be back again to testify before this subcommittee. In previous experiences here, I have found this subcommittee's hearings to be a very stimulating and challenging environment in which to pursue important issues. I have always been very impressed with the commitment of many members of this subcommittee to get at the central issues and to think carefully and proceed accordingly. It is a great pleasure to be back here.

You have my prepared statement for the record. Rather than read my statement, I will simply summarize what I consider to be the high points. I will ask in my own words some questions that I think respond to the ones you asked in your letter, Mr. Chairman, and then see what answers I can suggest.

The very first question that I would like to begin with is why a committee of Congress is examining a question as apparently abstract as the appropriate targets of monetary policy. I think there is a straightforward answer, and it is an interesting one to consider. The reason is not just that there is some dissatisfaction with monetary policy today but that, unlike previous periods in the past, the dissatisfaction has now hit a more fundamental level. People today are not simply asking whether the targeted rate of money growth is too high or too low, or why the Federal Reserve did not hit its target in the last month or two. The awareness of the Nation's economic difficulties has now gotten to the point at which there is a broad feeling that the problem is not just a wrong number, or failure to achieve the number sought, but whether monetary policy is going about this whole exercise in the right way. That is certainly the spirit in which I interpreted the letter you sent, Mr. Chairman, and I think it is very appropriate.

The experience of the last decade, and especially of the last few years, has highlighted the fact that the Nation's economic problems are deeper and more basic than just getting the right number for money growth. There is a more fundamental level of dissatisfaction that is in turn leading to more fundamental inquiries about whether monetary policy is on the right track in a basic underlying sense.

It is also significant in a broader context that this particular committee of Congress is taking the lead in that inquiry, because it was this committee that took the lead some years ago in originally urging the Federal Reserve to use monetary aggregate targets. If this committee itself now thinks that the time has come to reevaluate that way of running monetary policy, that in itself is a significant development.

The next question I would like to address is whether monetary policy should operate with any intermediate targets at all. Should the Federal Reserve simply aim at nonfinancial objectives, like employment, price inflation, international balance and so forth, without saying anything about how it will proceed to those objectives?

In a narrowly construed economic sense, that may be the best way to go about monetary policy, but a broader set of considerations—many of them having to do with the political process—lead me to believe that that would not be very healthy. The reasons go exactly to what Mr. Neal said in his opening statement. The Federal Reserve is, after all, a creature of the Congress. As such, it ought to be accountable to the Congress for what it does. The nonfinancial objectives that the Federal Reserve is trying to achieve are influenced importantly by monetary policy, but surely not exclusively by monetary policy. Fiscal policy is extremely important. Actions of cartels in international markets can be important. Disruptions to supplies of raw materials can be important. Agricultural harvests can be important. All of these factors would impinge on the ability to assess the Federal Reserve's accountability if the ultimate economic objectives were not met.

Hence it is important that there be some device that permits the Congress to exercise its oversight authority and responsibility in a serious way. I think Mr. Neal made the point better than I can. For reasons that are not strictly economic, therefore, we do need to have some intermediate target.

Here I would like to pause just for a moment to address one question raised by Mr. Patman. I certainly believe—and in fact I have said so in testimony before Congress on a number of occasions—that the Federal Reserve should state in advance its economic forecast. In other words, while announcing the targeted rate of growth for this or that aggregate is certainly important, it is also important to know what set of ultimate economic outcomes the Federal Reserve anticipates as a result of achieving those targets. The reason is that it is important that the Federal Reserve be on the same wavelength as the rest of the Government. After all, once again, the Federal Reserve is a creature of the Congress. If the Federal Reserve is pursuing a target in the hopes of achieving some nonfinancial objectives that are inconsistent with what the Congress wants to achieve, then that is a potentially serious matter. I am sorry I have not read the bill you submitted, Mr. Patman, but it sounds like one I might favor.

I now want to address the question that you raised very explicitly in your letter, Mr. Chairman. What are the criteria for a good monetary policy target if we are in fact to have targets? There are four separate criteria that are quite important. The most obvious one, of course, is that the target itself should have a stable and reliable relationship to the non-financial objectives of monetary policy. The target is, of course, not something that is intrinsically interesting. The targeting is worth pursuing only if it has something to do with nonfinancial objectives, which are the ultimate reason for having monetary policy in the first place. Hence this is the most obvious and, I think, the most important single criterion, but there are at least three more.

Second, it is important that the relationship between the target that the Federal Reserve uses and the nonfinancial objectives that it is pursuing not simply be one of a mirror. If the target always moved together with the nonfinancial economy, but simply moved contemporaneously with the nonfinancial economy, then, no matter how reliable that relationship would be, there would be no point in looking at the target. Why look in a mirror when you can look at the real thing? It is important that the relationship go beyond mere reflection and have some kind of information content, so that the behavior of the target today tells us about the likely behavior of the nonfinancial economy in the future. In other words, there must be predictive value in the target.

Third, the Federal Reserve must be able to do something about its targets. A simple counterexample will make the point. The stock market is a leading indicator of economic activity—not a perfect one, to be sure, but as leading indicators go, a pretty good one. An injunction to the Federal Reserve to control stock prices because stock prices reliably lead economic activity would be meaningless, because the Federal Reserve cannot do anything at all precise about stock prices. What is needed is a target that not only has a reliable relationship to the nonfinancial objectives of policy, and indeed a relationship of some predictive value, but also a target which, over some plausible time horizon—(which I do not think of as a week or a month, but rather a calendar quarter or a half-year—the Federal Reserve can do something about.

Finally, and almost trivially except that people lose track of it, data on the target have to be available on a readily reliable basis. It does not do much good to target a quantity that is measured 6 months later.

In the context of those four criteria, the question to be asked is simply: Is there a plausible alternative to the monetary aggregates? Everyone knows that, in some respect, the monetary aggregates meet each of those four criteria imperfectly. Is there any alternative?

My own work, which I have discussed with this committee in the past, leads me to the answer: Yes, there is at least one other plausible alternative that the Federal Reserve could use. It is credit. To be specific, the credit measure that has done very well throughout the research I have conducted in recent years is "total net credit." That is the total indebtedness of all nonfinancial borrowers in the U.S. economy. The reason for excluding borrowing by financial institutions is just to avoid double counting. For example, if someone buys a new house and finances it with a mortgage, that is a credit extension that matters. If the bank then finances its mortgage loan by issuing a certificate of deposit, then to count the certificate and the mortgage loan together would be double counting. Hence the measure that is best to use is total net credit. I would be glad to go into further detail later on, but the supporting material is available in my prepared statement and in other papers I have written.

In my judgment the total net credit measure does meet each of the four criteria for selecting a monetary policy target at least as well as do the monetary aggregates. It does have a stable and reliable relationship to the ultimate objectives of monetary policy, including not just nominal GNP but also real growth, price inflation

and so forth. This relation is not just a mirror. What happens to credit today is important for what happens to income, prices, and employment 6 months from now. The Federal Reserve does appear to be able to control the total amount of credit—not precisely, of course, and not over a very short time horizon, but by now everybody should know that the Federal Reserve cannot control money very precisely, either. In comparison with the monetary aggregates, credit does appear controlable. Finally, data on credit are readily available—not just in the flow-of-funds accounts which appear quarterly, but also on a monthly basis.

My conclusion, then, is: Yes, there is another alternative, one that the Federal Reserve has not tried. It is total net credit.

I will conclude by simply asking the final question you asked in your letter, Mr. Chairman. What should the Federal Reserve do? I do have a very specific proposal, which I advanced to this committee almost exactly a year ago. It is that the Federal Reserve should have an explict two-target policy, with two primary targets of approximately equal weight. One of these should be a monetary target. My work has nothing in particular to say about which monetary target. I assume that that would be M_1. The other target should be a credit target. Here my work suggests that it should be the total net credit measure.

The right way to make decisions about important matters like this is cautiously and incrementally, and therefore it would be an error at this time to switch entirely from a money target to a credit target—even if the evidence were clear that credit was better, which it is not. The evidence suggests that credit is about as good as money as a monetary policy target—perhaps a little better on some criteria and perhaps a little worse on others. If the Federal Reserve had to choose between an exclusive focus on credit and an exclusive focus on money, therefore, that choice would be a tossup. There is no reason, however, why it must choose between one exclusive focus and another. The Federal Reserve could run a better monetary policy if it monitored, in a target fashion, both money and credit, and taking signals from either one as important signs that ought to warrant reassessment of policy.

In the spirit of making an incremental proposal that I think would be a better way of running monetary policy, and allow the Federal Reserve over the course of several years to see whether money or credit does the better job as a target, I propose to have an explicit two-target policy, with a monetary aggregate and the total net credit aggregate. The two targets should receive equal attention. The Federal Reserve should report to this committee—and also to the Senate committee—the targeted ranges in advance and, in Mr. Neal's sense, should be held accountable over some reasonable time horizon for their success in meeting the two targets.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Friedman, "A Credit Target for Monetary Policy," follows:]

July 14, 1982

TESTIMONY BEFORE THE UNITED STATES HOUSE OF REPRESENTATIVES

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

Benjamin M. Friedman

Professor of Economics
Harvard University

A CREDIT TARGET FOR MONETARY POLICY

Mr. Chairman:

I am grateful for the opportunity to review with this committee the proposal for an alternative monetary policy framework that I presented to it almost a year ago. During the past year, as the U.S. economy has undergone its second business recession of the 1980s, monetary policy has been more than ever the focus of national attention. As people have continued to examine closely the course of monetary policy and its impact on economic events, they have increasingly begun to question not just the specific stance of monetary policy at any time but also the operating framework that defines U.S. monetary policy. In particular, many people have questioned whether the framework now in use, which centers on specific target rates of growth for the monetary aggregates, is the best way to conduct monetary policy today. I believe that this more fundamental concern is highly appropriate, and I hope that the committee's inquiry into possible alternative targets for monetary policy will further the prospects for a serious evaluation of this issue — and, if a sufficient consensus emerges, for actual reform. I am honored to take part in this discussion.

I believe that reform of the U.S. monetary policy framework is now

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overdue; that the exclusive emphasis on monetary aggregate targets has outlived its usefulness; and that a broader framework, based on both money and credit, would be more appropriate in today's economic and financial environment. Specifically, I propose that the Federal Reserve System adopt an explicit two-target framework in which it would focus both on the money stock and on the quantity of credit outstanding. I believe that a two-target money-and-credit framework for monetary policy would be more likely to achieve the objectives of economic growth, economic stability and price stability that both the Congress and the American public seek.

In this testimony I will first review several factors that account for the recent widespread disillusionment with the monetary target approach which now dominates U.S. monetary policy making. Next, I will outline the basic idea underlying the use of an intermediate target for monetary policy, and state four important criteria for choosing such a target. I will then say why, on each of these four criteria, credit is just as good a target as is money. Finally, I will outline the two-target money-and-credit framework that I have proposed, and explain why it is likely to be superior to the current money-only framework.*

The Disillusionment with Monetary Targets

Monetary aggregate targets have occupied center stage in U.S. monetary policy making in recent years. The Federal Reserve System first used such targets in a formal way in 1970. In 1975 the Congress passed House Concurrent Resolution 133, requiring the Federal Reserve to formulate monetary policy

*In what follows I will draw heavily on several of my recent papers, especially "Time to Re-Examine the Monetary Targets Framework" (New England Economic Review, March/April, 1982) and "Monetary Policy with a Credit Aggregate Target" (forthcoming in the Journal of Monetary Economics, available now in mimeo). See these two papers for further detail, including supporting evidence on the comparisons between money and credit.

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in terms of specific money growth targets to be reported to Congress in advance, and in 1978 Congress reinforced this requirement under the Humphrey-Hawkins Act. In October 1979, the Federal Reserve publicly reaffirmed its commitment to monetary aggregate targets, and adopted a bank-reserves operating procedure for seeking to achieve them.

Several strands of economic opinion and analysis, shared in varying degrees among people concerned with monetary policy, apparently led to this focus on monetary aggregate targets. One was the belief that the supply side of the U.S. economy was essentially stable, and that economic fluctuations were due mostly to instability in aggregate demand which a more stable money growth rate could help avoid. Another was the widely perceived problem of determining how any given level of interest rates would affect the economy, as rapid and volatile price inflation made "real" interest rates ever more difficult to measure; by contrast, measuring "money" was supposedly straightforward. Still another was the increasing focus on price inflation itself as a major economic policy problem, together with the belief (apparently supported by the then available evidence) that the rate of money growth placed an effective ceiling on the economy's inflation rate. Finally, a matter of importance at least to economists was the belief that behavior in the economy's financial markets, including especially decisions by households and businesses about how much money to hold, was more dependably stable than were important aspects of behavior in the economy's product and factor markets.

No doubt other influences, perhaps including political and even personality factors, were also at work in bringing about the adoption of the monetary targets framework during the 1970s, but this set of ideas probably comprised the central thrust of that important development. Each of these

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propositions, if true, would have represented a significant argument in favor of the use of monetary targets, and the joint validity of all of them would have constituted an overwhelming case for that way of designing and carrying out monetary policy.

Regardless of whether or not the best possible assessment of the available evidence actually supported these propositions at that time (a question which in hindsight people may debate without limit), they do not appear consistent with the facts today. The experience of the 1970s, and of the 1980s to date, has sharply contradicted each of them. Oil shocks and agricultural price shocks have powerfully illustrated the importance of instability on the economy's supply side as a cause of economic fluctuations. As financial market participants have shown their innovative skills by developing a wave of new financial instruments and new ways of using old ones, measuring "money" has become anything but straightforward. Price inflation has been able to outpace by substantial margins the ceiling supposedly set by money growth rates, at least for several years at a time. And economists' historical relationships describing the public's demand for money have all but collapsed.

For all of these reasons, today's disillusionment with the monetary targets framework for U.S. monetary policy is not simply a matter of unhappiness over the economy's recent performance. After all, any specific adverse economic experience could be due to either poor policy decisions or poor execution, or even bad luck, rather than an inadequate framework. The desire for change today is instead more fundamental, and therefore more persuasive. The well understood propositions that would favor the exclusive reliance on monetary aggregate targets, if they were true, just do not match today's environment.

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Using and Choosing Monetary Policy Targets

Central banks have often found it useful to formulate and implement monetary policy by focusing on some intermediate target or targets. Under an intermediate target strategy, the central bank specifies some financial variable(s) — in the United States today, the major monetary aggregates — to stand as proxy for the real economic targets at which monetary policy ultimately aims, such as economic growth, price stability, employment, and international balance. The result is, in effect, a two-step procedure. The central bank first determines what growth of the intermediate target is most likely to correspond to the desired ultimate economic outcome. It then sets some operating instrument over which it can exert close control — in the United States either a short-term interest rate or, since October 1979, the quantity of reserves — so as to achieve that growth rate for the intermediate target itself.

The essence of the intermediate target strategy is that, under it, the central bank is required to respond quickly (and fully) to any information reflected in the movements of whatever the intermediate target happens to be. Under the current framework in the United States, with monetary aggregates used as the intermediate targets, any movement in the public's money holdings immediately creates a presumption that the Federal Reserve System should react. In principle the Federal Reserve is always free to change the money growth targets, of course, but in practice it is typically reluctant to do so. The intermediate target strategy instead calls for actions aimed at regaining the stated targets, so that the economic signals contained in movements of the monetary aggregates create a presumption of immediate response. By contrast, the presumption of this strategy, strictly implemented, is that there will be no response to signals arising from other sources but not

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reflected in the intermediate targets.

If the intermediate target strategy with the monetary aggregates as the central targets is faulty, what should the Federal Reserve do in its place? One plausible response to the changed circumstances I have summarized above would be to reject the usefulness of any intermediate target at all for monetary policy. Without an intermediate target, the Federal Reserve would focus its policy directly on the nonfinancial economy — which, after all, constitutes the ultimate reason for having a monetary policy. Such a direct approach may well constitute the most effective policy framework, and an informed public discussion of the idea would be highly useful. Even so, a practical assessment of the situation suggests that, at least for the immediate future, both the Congress and the Federal Reserve itself are firmly committed to having some kind of intermediate target to facilitate monitoring monetary policy on an ongoing basis. Today's hearing on alternative targets for monetary policy appears to be in this spirit.

The question at hand, then, is to choose some alternative intermediate target to use in addition to (or perhaps even instead of) the monetary aggregates, as a focus of monetary policy. To be sure, an enormous variety of financial variables is available for this purpose. The problem is not just finding potential targets but identifying targets which, if used, would lead to a superior performance for monetary policy.

The structure of the intermediate target strategy itself suggests four important criteria for choosing such a target. First, and most obviously, the target should be closely and reliably related to the nonfinancial objectives of monetary policy. Second, movements of the target should contain information about the future (or current but not readily observable)

movements of the nonfinancial objectives of policy. A close relationship per se is necessary but not sufficient to make a useful target. Third, the target must be closely related to the operating instruments which the central bank can control directly — in the U.S. context, once again, either reserves or a short-term interest rate. There would be little point in having an intermediate target that the central bank could not reasonably expect to affect within some time horizon like a calendar quarter or a half-year. Fourth, data on the target must be readily available on a timely basis.

These four criteria will largely determine the suitability of any financial variable — including the monetary aggregates as under the current framework, or a credit aggregate as I have proposed, or any other alternative that the committee wishes to consider — as an intermediate target for monetary policy.

Evaluating Credit as a Monetary Policy Target

I have proposed a credit target for U.S. monetary policy because I believe that at least one specific credit aggregate, total net credit (the outstanding indebtedness of all U.S. nonfinancial borrowers), satisfactorily meets each of the four criteria I have stated above. Before proceeding to such a conclusion, it is essential to ask at the outset, "satisfactory" in comparison to what? Because the current framework used by the Federal Reserve System relies on monetary aggregate targets, the immediate standard required to support a proposal for change is that the proposed new target must meet these four criteria at least as well as do the monetary aggregates that are the current focus of monetary policy. I believe that total net credit does meet each of these four criteria at least as well as the monetary aggregates.

First, results based on a variety of methodological approaches

98-008 O - 82 - 3

consistently indicate that total net credit in the United States bears as close and as stable a relationship to U.S. nonfinancial economic activity as do the more familiar asset aggregates like the money stock (however defined) or the monetary base. Moreover, in contrast to the familiar asset aggregates, among which there appears to be less basis for choice from this perspective, total net credit appears to be unique in this regard among major liability aggregates. Unlike the asset aggregates, the stability of the relationship for total net credit does not just represent the stability of a sum of stable parts.

Because this first criterion for selecting a monetary policy target is the one that always receives the most attention, and rightly so, it is worth reviewing the relevant evidence with some care. The U.S. nonfinancial economy's reliance on credit, scaled in relation to economic activity, has shown almost no trend and but little variation since World War II. After falling from 156% of gross national product in 1946 to 127% in 1951, and then rising to 144% in 1960, total net credit has remained within a few percentage points of that level ever since. (The yearend 1981 level was 143%.) Otherwise it has exhibited a slight cyclicality, typically rising a percentage point or two in recession years (when gross national product, in the denominator, is weak) and then falling back. Although the individual components of this total have varied in sharply different directions both secularly and cyclically, on the whole they have just offset one another. In brief, the secular rise in private debt has largely mirrored a substantial decline (relative to economic activity) in federal government debt, while bulges in federal debt issuance during recessions have mostly had their counterpart in the abatement of private borrowing.

For purposes of monetary policy, however, what matters is not just

stability in the sense of zero time trend but stability in a more subtle (and, importantly, a dynamic) sense. Empirical analyses relying on several different methodologies — ranging from comparisons of "velocity" ratios, to comparisons based on detrended data, to "predictive" performance in regression equations explaining the variation of nominal income, to more complicated analyses based on bivariate and multivariate vector autoregression systems — all show that the relationship between total nonfinancial debt and economic activity is fully as stable and regular as is the relationship for any of the Federal Reserve's standard "M" aggregates (on either the pre- or post-1980 definitions) or the monetary base.

Further, the stability of the credit-to-income relationship is a phenomenon in no way restricted to the United States in the post World War II period. The U.S. nonfinancial economy's reliance on debt relative to economic activity has shown essentially no trend over the past 60 years. (The 1921 level was 142%.) Nonfinancial borrowers' outstanding debt rose significantly in relation to gross national product only during the depression years 1930-33, when the economy was deteriorating rapidly and many recorded debts had defaulted de facto anyway. Otherwise the postwar stability in the United States appears to be continuation of a pattern that dates back at least six decades. Among foreign economies, analysis of post World War II data thus far has demonstrated a similar comparability of the credit-to-income and money-to-income relationships in Britain, Canada, Germany and Japan. In sum, there is ample ground for believing that total net credit is as closely related to nonfinancial economic activity as is any of the monetary aggregates that are so central to today's monetary policy framework.

Second, the finding that the credit-to-income relationship is as regular and as stable as the money-to-income relationship would be of little

interest in a monetary policy context if the economic behavior underlying these results were such that money "causes" income while income in turn "causes" credit. The evidence contradicts that notion, however; indeed, if anything, they suggest the opposite. The relevant causal links between financial and nonfinancial economic variables appear to be highly complex, but results based on econometric exogeneity tests show that money and credit play roughly parallel roles, with credit somewhat more significant than money in determining the variation of either real income or prices. Still further results of decomposition of variance, based on a variety of different statistical specifications so as to avoid spurious conclusions, suggest not only that current movements of financial variables do contain potentially important information about future movements of nonfinancial economic activity but also that credit contains more of such information than does money.

Third, while it would be difficult for the Federal Reserve System to exercise very precise control over the total net credit aggregate over short time horizons, recent experience has demonstrated that the monetary aggregates are not easy to control either. What matters for the choice of monetary target variable, once again, is the comparison of money and credit. Evidence based on both quarterly and monthly regression relationships suggests that, if the Federal Reserve chose to pursue a total net credit target, it could achieve a degree of control over that target fully comparable to what is possible for the major "M" aggregates. The exact comparisons differ according to the time horizon used for judging successful control, and also according to whether the operating instrument the Federal Reserve used would be nonborrowed reserves (as since October 1979) or the federal funds rate (as before that date). In sum, however, the evidence is consistent with the Federal Reserve's being able to influence a total net

credit target, via either a reserves or an interest rate instrument, in a way that is at least comparable to its influence over the monetary aggregates.

Fourth, any intermediate target procedure based on a credit aggregate target would be useless if the relevant credit data were not readily available on a within-quarter basis. Although the standard vehicle in which the Federal Reserve publishes data on the total net credit aggregate is the flow-of-funds accounts, a publication which appears only once per quarter, the great bulk of the underlying data are actually available monthly. As of yearend 1980, for example, the toal net credit measure for the United States was $3,907.5 billion, of which $3,486.6 billion, or 89%, consisted of items regularly reported each month. Somewhat ironically, most of the items not currently reported on a monthly basis are the lending activities of various components of the federal government itself. Of the $420.9 billion of 1980 yearend total net credit not reported on a monthly basis, $352.6 billion represented credit advanced directly by the U.S. Government or by its sponsored credit agencies and mortgage pools. If the federal government were merely to comply itself with the reporting requirements it already imposes on the private sector, therefore, more than 98% of the total net credit aggregate would be available monthly. Moreover, even without any extra reporting effort, the credit data currently available on a monthly basis comprise an aggregate that fully meets the first three criteria for choosing a monetary policy target. The correlation between the complete total net credit series and what is now available monthly is very high (.99985), and the sum of what is available monthly exhibits just as close a relationship to nonfinancial economic activity as does the complete series.

In sum, total net credit, measured by the outstanding indebtedness of all U.S. nonfinancial borrowers, meets each of the four criteria for

choosing a monetary policy target at least as well as do the monetary aggregates.

A Proposal for a Two-Target Money-and-Credit Framework

I therefore propose that the Federal Reserve System adopt an explicit two-target framework, in which it would focus both on the money stock and on the quantity of credit outstanding. The Federal Reserve should pick one monetary aggregate, presumably M1, and one credit aggregate, total net credit; specify target ranges for both; and provide the quantity of reserves (or set a short-term interest rate) aimed at achieving these two targets. A deviation of either money or credit growth from its respective target range would then constitute a signal warranting reassessment of that reserve provision path (or interest rate level).

One potential difficulty in implementing this hybrid money-and-credit framework is a problem inherently associated with any policy of pursuing two targets instead of one. What if both targets are not simultaneously achievable? For all practical purposes, however, the Federal Reserve's current policy framework already suffers from just this problem, as the experience of M1 and M2 during 1981 demonstrated. If only M1 had mattered, the Federal Reserve would have had to conclude early on that its policy was too restrictive in relation to the specified target. By contrast, if only M2 had mattered, it would have had to draw the opposite conclusion. In resolving these conflicting concerns, the Federal Reserve had to decide on the relative importance of M1 and M2, and to determine why one was growing more slowly than anticipated and the other more rapidly.

A two-target framework based jointly on money and credit would in part have the same features. If money and credit were both growing in line with their respective targets, then the Federal Reserve would judge the

prevailing reserve provision path (or short-term interest rate) to be appropriate. If both were above target, then the implication would be to slow the provision of reserves (or raise the interest rate). If both were below target, the implication would be to speed the reserve provision path (or lower the interest rate). If one were above target and one below, however, then — just as now, with an M1 and an M2 target — the Federal Reserve would have to assess which was more important under the circumstances, and determine why one was moving in one dirction and one in the opposite direction relative to their respective stated targets.

The key advantage of an explicit two-target framework based on both money and credit, in comparison to a two-target approach based on two separate definitions of the money stock, is that it would draw on a more diverse information base to generate the set of signals that presumptively matter for monetary policy. Money is, after all, an asset held by the public, and each monetary aggregate is just a separate subtotal of the public's monetary assets. By having an M1 and an M2 target, as at present, the Federal Reserve is relying solely on the asset side of the public's balance sheet but adding up those assets in two separate ways. By having a money target and a credit target, the Federal Reserve would create a presumption of responding to signals from both sides of the public's balance sheet. The evidence that is now available indicates — not surprisingly, on some reflection — that both sides of the balance sheet do matter.

This two-target money-and-credit policy would require no legislation. On the contrary, the Humphrey-Hawkins Act directs the Federal Reserve to specify a target for credit growth as well as for money growth. In practice, however, the Federal Reserve has typically specified such a target but then ignored it. Moreover, it has chosen to focus only on credit extended through

the banking system, which the available evidence indicates is far from the best source of information about the economy, even from within the liability side of the public's balance sheet. Nothing in the legislation, however, requires that the Federal Reserve place its primary emphasis on money to the exclusion of credit, or that it focus only on bank credit among the available credit measures. In a legislative sense, therefore, a two-target money-and-credit framework would simply have the Federal Reserve be even-handed within the requirements already laid down by the Humphrey-Hawkins Act.

In conclusion, I will simply restate my belief that a two-target money-and-credit framework for monetary policy would be superior to the current money-only framework, and that, over time, a monetary policy based on both money and credit would be likely to help achieve a more satisfactory performance of the American economy — to the advantage of all.

* * *

Mr. Chairman, thank you for the opportunity to present my views to this committee.

Chairman FAUNTROY. I thank you, Dr. Friedman. We will move on now to Dr. Paulus whom we are very pleased to have with us. As I indicated, he is vice president, an economist, at Goldman, Sachs & Co.

STATEMENT OF JOHN D. PAULUS, VICE PRESIDENT AND ECONOMIST, GOLDMAN, SACHS & CO.

Mr. PAULUS. Thank you, Mr. Chairman, I am delighted to be here this morning.

In my written statement I discussed three questions all related to the general question: On what should the Federal Reserve target? The first question was: Is growth and M_1 related in a predictable fashion to growth in nominal GNP?

Growth in nominal GNP is related to growth in M_1 through the following identity: Nominal GNP growth is equal to M_1 growth, plus the growth in M_1 velocity. Thus, to assess the relationship between money and economic activity—in this case money is M_1—we can merely study the behavior of M_1 velocity.

During the last dozen years M_1 velocity has grown at a little over a 3 percent annual rate on average. Its standard deviation, which is a measure of the variance or the variability of the growth in M_1 velocity, has been 4½ percent. During the last 2 years, this standard deviation has increased to 7½ percent, which means that the variability of M_1 velocity growth has increased by more than 50

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percent. On the surface, this would suggest that there has been a weakening in the relationship between M_1 and economic activity.

It is conceivable that the greater variability in M_1 velocity could be due to a greater variability in factors that are thought to influence M_1 velocity, such as changes in real GNP and changes in interest rates. If so, then this increased variability in velocity would not necessarily be a serious problem because it could have been predicted and the Fed could have adjusted its targets for this change in the relationship between money and economic activity.

I did examine M_1 velocity in that context. I looked at how predictable changes in M_1 velocity were after adjusting for changes in interest rates and economic activity. Even after making these adjustments I found that the relationship between money and economic activity in the last 2 years has been weakened appreciably.

That raises the question, of course: What has happened; why has the relationship weakened? If I were to point to one decisive factor, it would be the level of interest rates. Extraordinarily high interest rates provide powerful incentives for cash managers—and that would include individuals as well as corporations—to fundamentally alter their payments practices, to try to economize in noninterest-bearing cash. Cash management and sweep accounts, and money market mutual funds are examples of new payments practices and instruments which have drawn funds out of demand deposits and depressed the rate of growth of M_1 relative to the GNP.

On the other hand, the nationwide introduction of NOW accounts a year and a half ago has tended to bloat M_1 growth by attracting a substantial volume of nontransactions money into NOW accounts which, of course, are a part of M_1. The result is we have had a tug of war, with some factors tending to pull M_1 growth down relative to GNP, while other factors have tended to push it up. Ultimately, the effect of these factors has been to appreciably weaken the relationship between money and economic activity. And that raises a serious question about the wisdom of continuing to target exclusively on M_1.

The second question I considered was: Is the target range for M_1 high enough to allow a resumption of growth, even moderate disinflationary growth, anytime in the next year or so? The top of the M_1 target range is 5½ percent. The core rate of inflation in this country is probably 6 percent or a bit higher. Thus, if the target is hit, the real stock of money will have to decline. During the last 21 years there have been 11 years when the real stock of M_1 has declined. That is to say, M_1 growth was below the inflation rate. During those 11 years, real GNP grew by roughly 1½ percentage points below trend for the whole 21-year period.

Hitting the targets implies a contraction in the real stock of money which, in turn, implies below trend growth in real GNP. Now, trend growth in real GNP today is probably about 2½ percent. If we hit the targets, and if the economy grows 1½ percentage points below trend, we should expect no more than about 1 percent growth in real GNP over the next year or so. Now if I could, I would like to add that the behavior of the real stock of money over the last 12 months helps to explain why interest rates have remained so high and why the economy has been so weak.

It has been charged by some that interest rates have remained high because of the erratic nature of monetary policy, because the wide swings in money supply have created so much uncertainty. This it is charged, is why interest rates have remained high. The fact is that U.S. monetary growth has been far more stable than growth in most foreign countries. For example, the monthly growth rate of M_1 has been 1½ times more volatile in Germany in the last 12 months than in the United States. In Japan, it has been 5 times more volatile than it has been in the United States in the last 12 months.

What has happened in the last 12 months is that the real stock of money has declined. M_1 has grown by 5.2 percent; the CPI has increased by 6.7 percent. As a result, there has been a decline of roughly 1½ percent in the real stock of money. That I think is the reason why interest rates have remained high, and that is why real GNP in the last four quarters has fallen by 1½ percent. It is not the erratic nature of money growth; it is the tightness of monetary policy that has produced high interest rates and a declining economy.

The third question I considered was: What supplemental target or indicator might the Fed adopt if it is concluded that M_1 is unsuitable to continue to serve as the almost exclusive target of monetary policy? And I can almost stop here because I agree completely with Ben Friedman. I do believe the Fed ought to continue to target on M_1. The Fed, after all, creates money. Excessive creation of money leads to inflation. But M_1 is not an infallible indicator of the effect of monetary policy on the economy. I think it is better than M_2, M_3, bank credit, L or any other monetary aggregate, but it is not infallible.

There is a credit market aggregate that I believe could serve as a reliable indicator, if not a target of the effect of monetary policy on the economy. It could be especially useful during periods when the relationship between money and economic activity has been weakened. This indicator is the ratio of private, nonfinancial borrowing to GNP. By private, nonfinancial borrowing, I mean borrowing by nonfinancial corporations, households and state and local governments. I include the latter because they react very much in the same way to changes in interest rates as do private corporations. When this ratio has been high in the past, the supply of money and credit has been ample, the economy has grown rapidly, resources have been fully utilized, and inflationary pressures have built. When the opposite has been true and this ratio has been low, the economy generally has weakened and inflationary pressures have ebbed. I have presented some empirical evidence in chart form of those statements in my written statement.

The ratio of private borrowing to GNP is now about 30 percent below its average value for the last decade. This implies, I believe, that monetary policy continues to be restrictive. That assessment would contrast with judgments based on M_1 growth at least up to about 2 weeks ago, when M_1 had been growing around 7 percent during the first half of the year. Many market participants would have made the determination that monetary policy, on that basis, had been too stimulative.

In the second half of 1982, suppose the Fed finances a moderate disinflationary recovery—and what I mean by disinflationary recovery is one with real GNP growing below trend during the first year of an economic recovery. Real GNP typically grows by around 7 percent. Let's suppose the Fed finances a recovery with real GNP growing at around 3 percent so that resource utilization rates remain very low. M_1 will rise above the top of its target range, while the private borrowing ratio will remain, I believe, well below its normal or average value over the last dozen or so years. Market observers watching M_1 strictly relative to its target would probably conclude that the Fed has capitulated in the fight against inflation if it financed a modest to moderate economic recovery, merely because M_1 has moved above the top of the target range. But if it finances such a recovery, the ratio of private borrowing to GNP would remain comfortably below its average level. This ratio, I believe, would reflect a more accurate signal of the degree of ease or restraint in monetary policy than M_1. This is because I think it would be correct to conclude that if the Fed financed only a 3 percent growth recovery through the next year, that monetary policy had not capitulated, that it would remain moderately restrictive.

Thus, the adoption of a private borrowing ratio as an indicator of monetary policy, if it is explained properly to the public—and Professor Friedman is doing a superb job of doing that for the Fed—could help the Fed to maintain some of the credibility that it has gained in the last year or so, while financing a moderate, disinflationary recovery, which may require that the M_1 target be overshot.

That concludes my remarks, Mr. Chairman.

[The prepared statement of Mr. Paulus follows:]

Statement by John D. Paulus

Vice President and Economist, Goldman, Sachs & Co.

before the Subcommittee on Domestic Monetary Policy of the

Committee on Banking, Finance and Urban Affairs,

U.S. House of Representatives

July 14, 1982

I am pleased to have the opportunity to present my views on the monetary targets of the Federal Reserve to the subcommittee on Domestic Monetary Policy of the Committee on Banking, Finance, and Urban Affairs. I will discuss three related questions: (1) Is growth in M_1 related in a predictable fashion to growth in nominal GNP?; (2) Is the target range for M_1 high enough to permit a resumption of growth, even moderate disinflationary growth, in GNP anytime in the next 18 months?; and (3) What supplemental target or indicator might the Federal Reserve adopt if it is concluded that M1 is unsuitable to continue to serve as the exclusive target of monetary policy?

Several tentative conclusions emerge. First, the relationship between growth in M_1 and in nominal GNP appears to have weakened in the last two years, which raises serious doubts about the wisdom of continuing to target almost exclusively on M_1. Second, high U.S. interest rates and sluggish growth in real GNP have been caused by a contracting real stock of money, not by "erratic" growth of M_1 as some charge. Moreover, if M1 growth is constrained to the 2½% to 5½% target range, real GNP probably can grow at no more than about a 1% rate in the second half of 1982 and in 1983. Third, the ratio of private borrowing to GNP is a reliable indicator of the effect of monetary policy on economic activity

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and inflation. This ratio could serve as a useful supplement to the M_1 target as an indicator of monetary policy.

I Is M_1 a Reliable Monetary Target?

A monetary target should be predictably related to some final "goal" of policy. The most widely accepted monetary policy goal is control of the rate of growth of nominal GNP. An effective monetary target, therefore, should be related predictably to the growth rate of nominal GNP.

The Federal Reserve now establishes target ranges for M_2, M_3, and bank credit, in addition to M_1. The higher M's and bank credit are not effective targets because fluctuations in these aggregate measures are not meaningfully related to changes in nominal GNP[1]. Similarly, the monetary base, which has frequently been proposed as a target of monetary policy, suffers from the same deficiency[2].

Narrowly defined money, M_1, is empirically related to nominal GNP and can, therefore, serve as an effective target of monetary policy. But in deciding how much reliance to place on M_1 as a target it is necessary to determine how "close" is the relationship between M_1 and nominal GNP.

Growth in nominal GNP is related to growth in M_1 through the following identity:

growth of nominal GNP = growth of M_1 + growth of M_1-velocity

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[1] See "A Case for Abandoning the Higher Monetary Aggregates" in the January, 1981 Financial Market Perspectives, Goldman Sachs Economics. See also "Indicator and Filter Attributes of Monetary Aggregates," by Peter Tinsley, Paul Spindt, and Monica Friar, Journal of Econometrics, 1980, Volume 14, pages 61-91.

[2] See "What Would Stable Monetary Base Growth Accomplish?" in the May, 1981 Financial Market Perspectives and Comment on "Federal Reserve Operating Procedures: A Survey and Evaluation of the Historical Record Since 1979" by John Paulus, forthcoming in the Journal of Money, Credit and Banking, Volume 14, no. 4 (November 1982, Part 2).

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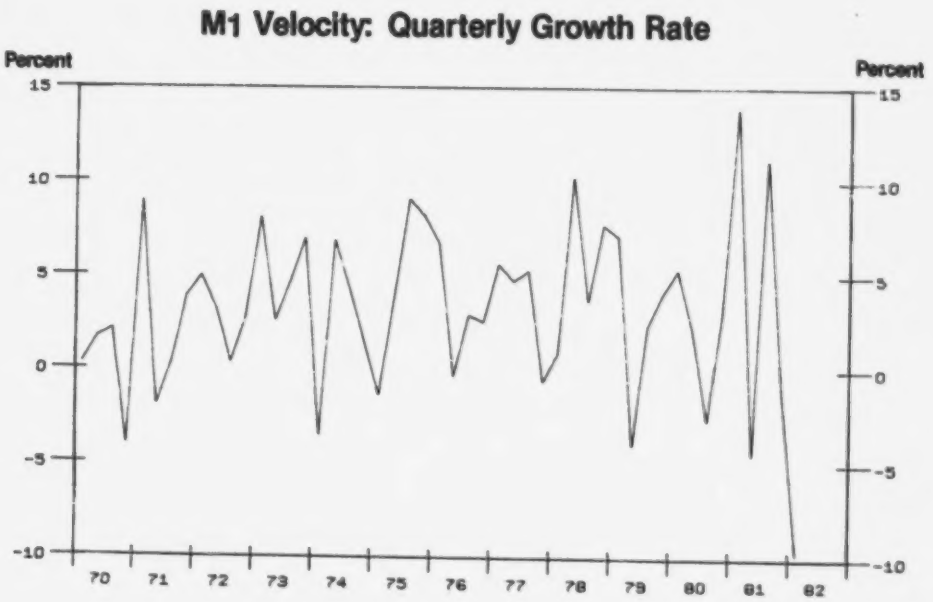
If the growth of the velocity of M_1 is fairly stable, growth of nominal GNP will be closely related to growth of M_1. We can, therefore, assess the relationship between M_1 and nominal GNP by studying the behavior of M_1-velocity (V_1 hereafter).

Quarterly growth rates of V_1 during the last dozen years are shown in the Chart. Over this period V_1 has grown at an average annual rate of 3.1%. The standard deviation of the quarterly growth rates from this mean was 4.5%. Loosely speaking this means that about two-thirds of the growth rates of V_1 were within a range of -1½% to 7½%.



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During the last two years, beginning with the second quarter of 1980, the average rate of growth of V_1 has declined to 1½%. More importantly, the standard deviation has soared to 7½%. On the surface the wider variation in V_1 suggests that the relationship between M_1 growth and growth of nominal GNP has weakened somewhat in the last two years.

To gain further insight into this relationship it is useful to examine the behavior of V_1 relative to its principle determinants. For if the increased variation in V_1 can be attributed merely to increased variation in its determinants, the wider fluctuations in velocity might have been predictable. The slippage in the linkage between M_1 and nominal GNP might not have been a problem then, had it been predictable.

There are three main determinants of V_1. They are: changes in interest rates; changes in real GNP; and changes in the growth rate of nominal GNP. When interest rates are high, households and business firms seek to economize on noninterest bearing cash balances. This raises the turnover rate of money.

In addition, because there are "economies of scale" in making real transactions, more rapid growth in real GNP raises velocity. When real GNP rises by, say, 10%, desired money balances tend to rise by less than 10%. The difference between the increase in real GNP and the smaller increase in money represents an increase in velocity.

An increase in the rate of growth of nominal GNP also temporarily raises velocity because actual money balances are not adjusted instantaneously to a rise in nominal spending. If nominal GNP growth were to rise by a percentage point due to an increase in inflation, money balances

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initially would rise by less than the one percentage point rise in desired balances because of the high costs of rapidly adjusting money balances. For a time this would raise the measured rate of turnover of money.

A velocity equation that incorporates these considerations is:

$$\log V = \underset{(-.9)}{-.47} + \underset{(4.9)}{.76} \log V_{-1} + \underset{(5.1)}{.72} \log \frac{Y}{Y_{-1}}$$

$$+ \underset{(1.1)}{.11} \log y + \underset{(.9)}{.011} \log RS + \underset{(2.9)}{.013} \log RTB$$

Where V is M_1 velocity (V_{-1} is velocity lagged one period), Y is the level of nominal GNP, y is the level of real GNP, RS is the rate paid on commercial bank passbook savings accounts, and RTB is the three-month T-bill rate. Standard errors of the fitted coefficients are shown in parentheses. The equation was fit with quarterly data from 1960-IV through 1974-II.

According to this equation, a 10 percent increase in real GNP initially raises M_1-velocity (V_1) by 8.3 percent -- 7.2 percentage points of which is through its effect on nominal GNP. After several quarters, when actual money balances have increased fully to desired, velocity will have risen by about 4½ percent. A 10 percent increase in inflation initially raises V_1 by 7.2 percent. After several quarters this jolt to velocity disappears (i.e., velocity growth becomes negative as money balances rise to desired levels and velocity returns to its original level). A 10 percent increase in three-month T-bill rates (i.e., a rise from, say, 12% to 13.2%) raises V_1 immediately by .13 percent. After money balances are finally adjusted to desired levels, V_1 will rise by about .5 percent. A change in the rate paid on passbook savings accounts has an effect similar to that of three-month T-bills.

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Using the previous equation, the behavior of V_1 can be studied since the then record high interest rates of 1974 began to fundamentally alter payments practices. Shown in the table is the actual growth rate of V_1, the "predicted" growth rate -- i.e., that which would have emerged had the historical relationship between V_1 and its principal determinants been maintained -- and the difference between actual and predicted growth rates. This difference is a measure of erratic, or unpredictable, changes in V_1.

The period from mid-1974 to 1982 can be divided into three sub-periods. From 1974-III to 1976-IV, V_1 grew substantially faster than predicted. This acceleration in V_1 growth reflected the massive change in payments practices that was induced by the record high interest rates

V_1 GROWTH:
ACTUAL AND PREDICTED

	Actual	Predicted	"Error"		Actual	Predicted	"Error"
1974-III	4.3	-0.5	4.8	1979-I	7.1	3.7	3.4
-IV	1.4	-2.7	4.1	-II	-4.0	-1.9	-2.1
1975-I	-1.3	-7.3	5.9	-III	2.4	3.6	-1.2
-II	3.8	0.4	3.4	-IV	4.1	1.6	2.5
-III	9.0	6.8	2.2	1980-I	5.3	4.8	0.5
-IV	8.1	1.1	7.1	-II	2.2	-8.4	10.5
1976-I	6.7	2.1	4.6	-III	-2.6	2.2	-4.9
-II	-0.3	-2.1	1.8	-IV	3.0	6.4	-3.4
-III	2.9	-0.8	3.7	1981-I	13.9	8.9	5.0
-IV	2.5	1.4	1.2	-II	-4.5	-2.9	-1.6
1977-I	5.6	5.7	-0.1	-III	11.2	2.6	8.6
-II	4.7	2.9	1.8	-IV	-1.2	-4.4	3.2
-III	5.3	3.6	1.6	1982-I	-9.7	-6.4	-3.3
-IV	-0.6	0.6	-1.2				
1978-I	0.9	1.7	-0.8				
-II	10.2	10.0	0.2				
-III	3.7	3.0	0.7				
-IV	7.7	6.3	1.4				

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of 1973 and 1974. The second period extends from 1977 through early 1980. During these three years V_1 grew at a rate close to that predicted by its fundamental determinants. The average error was only .5% and the standard deviation of the errors was only 1.5%. But during the third period, 1980-II through 1982-I, the relationship broke down again. The average error over this two year period has been 1.8% (i.e. V_1 grew by 1.8% faster than predicted, on average) and the standard deviation of the errors rose to 5.5%. The variation in the errors thus has been about four times greater during the last two years than during the previous three years.

Why the huge increase in the errors? The sharp rise in both the average level and the volatility of interest rates probably helps to explain much of the increase in V_1 errors. Prior to the change in Federal Reserve targeting procedures in October 1979 the record level of 90-day T-bill rates was around 9½%. But in the first quarter of 1980, just before the V_1 errors exploded, 90-day T-bill rates averaged 13½%, almost 50% higher than the record level before the change in targeting procedures. New highs were again reached in the third quarter of 1981, when bill rates averaged over 15%.

Such extraordinarily high interest rates have provided powerful incentives for cash managers (including households) to find new, more efficient ways to make cash payments. Cash management and sweep accounts, for example, have permitted households and corporations to economize on noninterest bearing demand deposits. Similarly, money market mutual funds, which grew from $34 billion at the end of 1979 to over $200 billion in 1982, have attracted funds from demand deposits.

These developments should speed up V_1 (recall that V_1 has grown 1.8% faster than predicted since the second quarter of 1980). However, the introduction of NOW accounts nationwide in January 1981 has tended to have the opposite effect -- to depress V_1. According to Federal Reserve estimates, about $13 billion in savings in 1981 seeped into NOW accounts, which are included in M_1. This bloated the growth rate of M_1 and depressed V_1 growth by a little over three percentage points last year. Moreover, I have made a rough estimate that another $2.8 billion in savings flowed into NOWs in the first quarter of 1982, raising the growth rate of M_1 and lowering V_1 growth by about 2½ percentage points[3].

With such diverse and divergent forces affecting M_1, it is not surprising that the relation between narrowly defined money and nominal GNP has been weakened appreciably. This weakened relationship raises grave doubts about the practice of targeting exclusively on M_1.

II Another Problem with the M_1 Target

The Federal Reserve has been criticized for permitting M_1 to grow at an erratic pace. Wide swings in money growth, it is reasoned by some, have been responsible for the high level of U.S. interest rates and the resultant slow growth of economic activity. Actually, the growth of M_1 during the last year has been far more stable in the U.S. than in Germany and Japan, two countries with lower interest rates and stronger economic growth than the U.S. During the last 12 months the standard deviation of the monthly growth rate of M_1 (annualized)

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[3] See the essay "Targeting Problems Ahead?" in the May, 1982 Financial Market Perspectives.

has been 8.3% in the U.S. In Germany and Japan for the last twelve months for which data are available the standard deviations were 11.5% and 41.0%, respectively. Growth of M_1 in Germany was almost 1½ times and in Japan almost 5 times more variable than in the U.S.

High interest rates and sluggish economic activity in the U.S. have not been caused by erratic growth of money, but by the low average rate of growth of M_1 relative to inflation. In the last 12 months M1 has grown by 5.2%, of which about 3 percentage points represented inflows of nontransactions balances into NOW accounts. The consumer price index increased by 6.7% over the same period, implying that real money balances actually contracted. The shrinkage of real money balances, and not the so-called erratic behavior of M1, is the reason why real GNP has declined by about 1½% in the last year.

The top of the 1982 target range for M1, 5½%, probably is still below the core rate of inflation in the U.S. If the target were hit for the year, real money balances would have to contract further. Hitting the target thus implies a severe constraint on growth in real GNP.

To try to quantify the effect of declining real money balances on growth in real GNP, the scatter chart displays the relationship between growth in real money balances and growth in real GNP since 1962. Each point represents the actual rate of growth of real M1 and of real GNP (fourth quarter to fourth quarter) for a single year. As can be seen, the slower the growth of real money the more likely it is that real GNP will grow at a slow pace.

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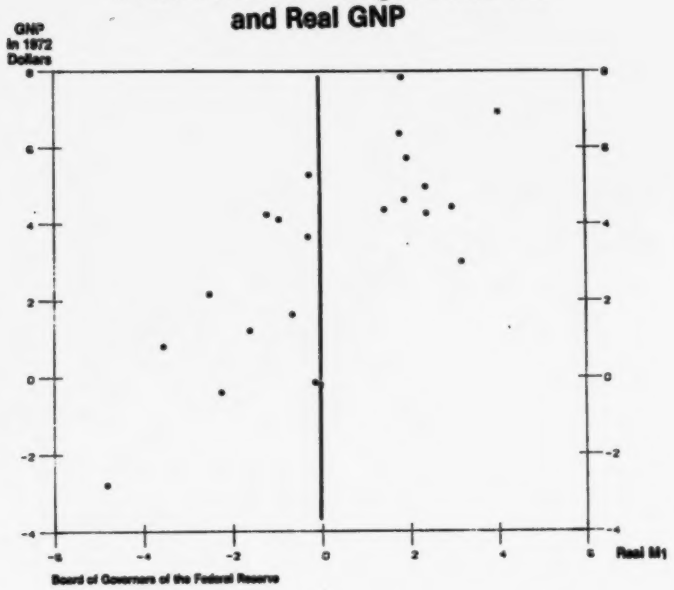
Annual Percent Change in Real M1 and Real GNP



During the 21 years from 1961 to 1981 real GNP grew at an average annual rate of 3.4%. In the eleven years when real M_1 declined, real GNP grew at an average annual rate of 1.9%, or about 1.5 percentage points below trend. This compares to growth of 5.2%, or a little over 1.5 percentage points above trend, during the ten years when real M_1 expanded.

"Trend" growth in GNP probably is now around 2½%. (The drop from the 3.4% average of the last two decades is a consequence of the sharp decline in worker productivity in the last few years.) If the M_1 targets

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are hit this year and next and real M_1 shrinks further, real GNP probably would grow at a pace below this lower trend rate. Indeed, the experience of the last twenty years would suggest that real GNP could grow at no more than about a 1% rate, or 1½% below trend.

Even if the M_1 target is overshot slightly, real GNP probably would grow at a below trend rate, implying that further progress is being made against inflation. Thus, it is not necessary for the M_1 target to be hit in 1982 or, probably, 1983 in order for inflation to decline further.

III Alternative Targets

Despite the shortcomings of targeting exclusively on M_1, the target for narrowly defined money should be retained because it serves as an important source of discipline on monetary policy. The Federal Reserve, after all, creates money, and excessive creation of money produces inflation. But the two problems of exclusive targeting on M_1 cited above -- the weakened relationship between M_1 and nominal GNP, and the target range being below the core rate of inflation and therefore being inconsistent with moderate but disinflationary economic growth -- can be ameliorated by the adoption of a credit market aggregate indicator as a supplement to the M_1 target.

The credit markets represent an important channel of influence of monetary policy on economic activity. When money is scarce and interest rates are high, borrowing will be restrained. Lower borrowing in turn implies slower growth of real GNP, increased slack in product and labor markets, and reduced inflation pressures.

The rate of private borrowing -- i.e., borrowing by households, nonfinancial corporations, and state and local governments[4] -- can serve

[4] State and local governments are included in the "private" sector because they react in much the same manner to changes in interest rates as do corporations.

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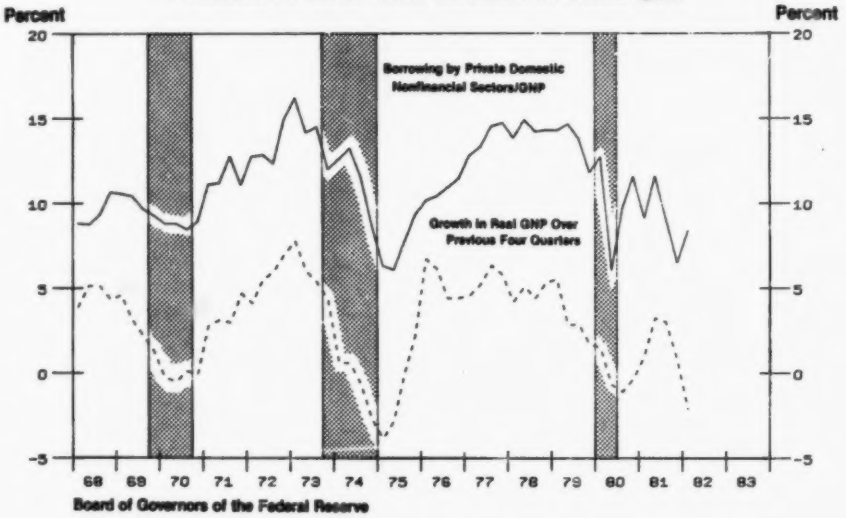
as a reliable measure of the degree of ease or restraint of monetary policy. Specifically, as shown in the chart, when the ratio of private borrowing to GNP has been high -- i.e., when money and credit are in ample supply -- real GNP has tended to grow rapidly. When borrowing has been restrained by tight policy, real economic activity has tended to grow at a slow pace, or even to contract.

Private Domestic Nonfinancial Borrowing as a Percent of GNP and Growth in Real GNP



High rates of borrowing, moreover, tend to produce increases in inflation with about a six quarter lag. Higher borrowing induces faster economic growth which in turn leads to fuller resource utilization and higher inflation. Low rates of borrowing have an opposite

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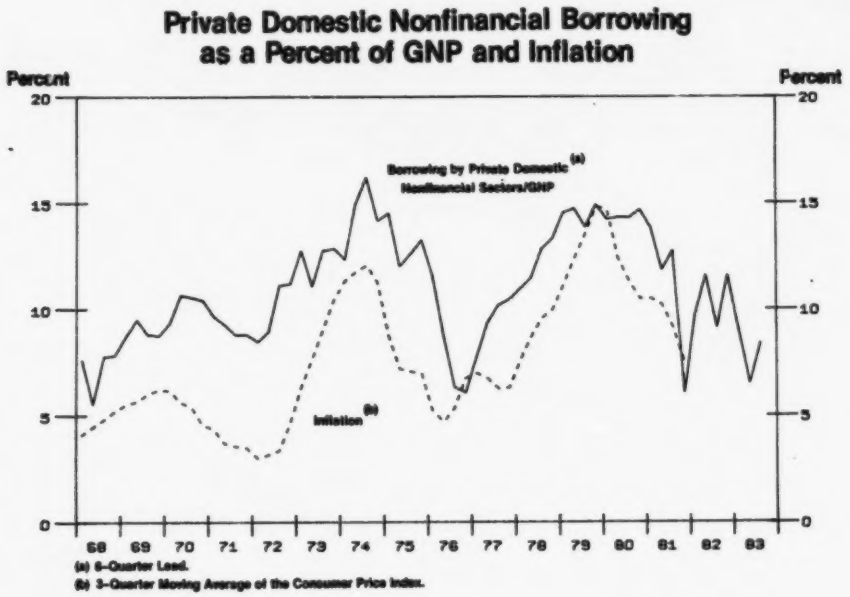
effect on inflation. This relationship is shown in the next chart, which displays the ratio of private borrowing to GNP and the rate of increase in the CPI. The former series has been advanced six quarters in order to more clearly show the linkage between credit market borrowing and inflation.



The ratio of private borrowing to GNP has averaged 12% in the last dozen years. It now is around 8½%, or well below its average level. This measure suggests that monetary policy remains restrictive. In contrast, many money market participants, observing M1 growth of around 7% in the first half of 1982, believe that monetary policy has been too stimulative because the 1982 targets generally have been exceeded. This

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judgment probably is incorrect, especially in view of the very high real pre- and after-tax interest rates in the U.S., the extraordinary strong foreign exchange value of the dollar, and the continuing weakness of commodities prices. But it nevertheless undermines the Fed's recently rebuilt credibility.

Formal adoption of the private borrowing ratio as an indicator, if not a target, of monetary policy could permit the Federal Reserve to demonstrate that while overshooting the M1 target by providing sufficient monetary growth to sustain a weak economic recovery, monetary policy remains moderately restrictive as long as the borrowing ratio remains comfortably below its average level of the last dozen years[5]. This could help to reassure the financial markets that the Fed has not capitulated in the struggle against inflation just because the target range for M_1 has been overshot. Adoption of the private borrowing ratio then might enable the Federal Reserve to retain some of the gains in credibility achieved in the last year while financing a moderate but disinflationary economic recovery.

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[5] Quarterly flow-of-funds data on private borrowing are available from the Federal Reserve about six weeks after the end of each quarter. However, most of the components of private borrowing are available on a more timely basis. The Fed probably could publish a reliable estimate of private borrowing on a monthly basis.

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Chairman FAUNTROY. And I thank you, Dr. Paulus. I am going to yield for 5 minutes to the gentleman from Texas so that Dr. McKinney may respond to those questions which he felt he wanted to answer.

Mr. PATMAN. Will my time be diminished by their answers?

Chairman FAUNTROY. No; we are going to take the necessary time this morning to ask all your questions.

Mr. PATMAN. Fine. On the total net credit you mentioned, I believe, Dr. Friedman, are you speaking about credit minus the built-in interest charges? And I am thinking specifically about a finance company which might have a $5,000 loan out to finance some home improvements that actually has $2,500 that has gone across the counter. And the rest of that $2,500 is built into the note that the borrower signs; specifically, add-on interest.

Are you discounting the add-on interest and just having principal represented there?

Mr. FRIEDMAN. If we could get those companies to report the data in a complete way.

Mr. PATMAN. And why can't we do that? Why don't we have those figures now? I am disturbed by the fact that we are shown that there is a large increase in consumer credit, and therefore, the economy is improving perhaps, or borrowers are showing more confidence in the system when actually, if we were to analyze that with the proper figures, we would see that most of that increase is actually represented by increase in the interest rates that the borrowers are charged. And that has been especially dramatic I think in the last few years.

Mr. FRIEDMAN. My answer to your question, Mr. Patman, is that if we could get those companies to report the actual balance outstanding, that is what we would want. Now, for various reasons, they are very reluctant to do so. I also gather that today is not a time when imposing additional reporting requirements on the private sector is very popular in Washington. As an economist who uses data on borrowing, however, I know that the better the data we have, the better job we can do. If we had this specific information, we would use it in just the way you say.

Mr. PATMAN. We have it in Texas at the Office of Consumer Credit. They report that, unless I am mistaken, right now today. I imagine that various other agencies do that, too. They have that available in other States.

But the tightness of monetary policy we all hear—and this is for all three witnesses—that we have high interest rates because—the highest rates of interest, real rates, in the history of the country, because lenders are building in an inflationary factor or an inflationary expectation factor.

If we had the free market setting rates without the interference of the Federal Reserve artificially tightening the supply of money, would not those rates fall down and the lender be unable to add on this inflationary factor, any more than I can add it onto the price of cattle I sell or the price of grain sorghum that we sell down there in Texas.

Mr. MCKINNEY. I do not think that this is a one-sided proposition. It is two people who are in the act there, the borrower and the lender. If the borrower assumes that a particular rate of inter-

est is a reasonable rate of interest, he will pay it. If the lender assumes it is a reasonable rate of interest, he will charge it. And if the two get together on some particular high rate of interest, the market rate of interest will be high. If one or the other is reluctant, he will not be able to just add it on.

For example, you can in Texas get a higher price for cattle when the cattle are scarce, not simply because the guy at one end of the transaction demands more money without any reaction on the part of the buyer, but the buyer and the seller both know that cattle are scarce, therefore the price goes up. It works the same way with money.

Mr. PATMAN. Sure. Now, if we could get the Federal Reserve to manage our cattle supply the way they manage the money supply, we would have higher cattle prices too, would we not?

Mr. MCKINNEY. Well, let me go back to the money for one second, if I may. If the Federal Reserve were to try to push interest rates down by increasing money or credit, the result would be in the short run, to lower interest rates. It used to be that they could pull rates down pretty far, but these days the borrower has gotten wiser and the lender has gotten wiser. When the Federal Reserve pushes out money and pushes down interest rates, the public expects an inflationary result, and therefore in fairly short order interest rates would move back up again, as has happened in the recent past. It is quite likely, with fears that the Fed would chicken out, and with the situations which now exist at home and abroad, that the time lag would be zero—that the immediate reaction would be an expectation of inflation and higher interest rates.

Mr. PATMAN. Nevertheless, you mentioned in the short term the interest rates would go down immediately.

Mr. MCKINNEY. Probably, but I am not sure that that is the case at this particular stage of the game, because the question of whether the U.S. Government and the U.S. central bank really are willing to do what is necessary to reduce inflation is one of worldwide concern. Given that high level of concern, it is possible that, if the Federal Reserve were to ease money, the market reaction would overpower the change in the availability of money.

Mr. PATMAN. What factors, as represented by commonly known indices, such as GNP and 90-day Treasury bills, 180-day Treasury bill rate levels, would the Fed necessarily take into account and have in its portfolio when it makes a decision to change its monetary policy? In other words, what should we reasonably, could we reasonably, ask for the Fed to provide to us in the way of, I would not say targets, but its results that it anticipates from a change in its monetary policy?

Is it only to calculate the monetary aggregates and decide that they want to adjust those some, irrespective of what the results will be for the economy? Or do they actually make some projections?

Mr. MCKINNEY. They will make projections.

Mr. PATMAN. On these various factors? Do they make a projection on unemployment?

Mr. MCKINNEY. They make projections on all of these factors.

Mr. PATMAN. When you say "all of these," what are you speaking of? Name a few of them.

Mr. McKINNEY. Gross national product, nominal gross national product, the unemployment rate, the level of employment, the industrial production index. The list is long.

Mr. PATMAN. And would that include interest rate levels, of course?

Mr. McKINNEY. It would of course include projected interest rate levels.

Mr. PATMAN. So when they make a change in the monetary policy, they anticipate certain interest rate levels to follow?

Mr. McKINNEY. Yes, certainly, and they are frequently wrong because they do not have control over interest rates and therefore find it difficult to estimate market reactions.

Mr. PATMAN. Should not the public be apprised of these?

Mr. McKINNEY. I do not think so.

Mr. PATMAN. I think some of you indicated, and you specifically, that it ought to be kind of a closed shop operation, where they have broad objectives and they will let us in on some, maybe, knowledge of their objectives, but not the specific targets that they have, the specific results.

Mr. McKINNEY. I believe I differ in some degree from the other witnesses in this respect. I personally believe that the spilling of blood by the Federal Reserve, the detailed information on their day-to-day operations, is counterproductive. I suggest that market behavior demonstrates this. Whenever the money supply comes out and it is up a little bit above the Federal Reserve targets, you will get an immediate upward movement of interest rates. Last week the interest rates moved down because they were a little bit under the upper edge of their money growth target.

Mr. PATMAN. And it was anticipated that the Fed would not tighten its interest rates, its policies?

Mr. McKINNEY. That is right. And I think it is ridiculous to operate under a system which imposes on the market the knowledge that there are week-to-week actions being taken that do not have longrun significance, but which do impact the market's decisions and therefore cause unnecessary and erratic fluctuations in interest rates.

Mr. PATMAN. How can we know really that the Fed knows what it is doing without this knowledge?

Mr. McKINNEY. By way of example, if you get into the detailed question of how the doctor treats the patient—the detailed question of how aspirin cures a headache—you are not going to have many patients or many headaches cured. If you get into the questions of how the Federal Reserve does the detail of what it is doing, it is not going to have time to do anything constructive.

Mr. PATMAN. Fine. Well, of course, we all want to avoid voodoo economics, and we do not want it practiced any more in the Fed than we want it practiced elsewhere. And I think the public would like some reassurance that we do not have that being practiced.

Mr. FRIEDMAN. May I add something?

Mr. PATMAN. We feel the effects of it.

Mr. FRIEDMAN. In answer to a question you were asking just a moment ago, I gather that what you are looking for, in part, is a set of ultimate nonfinancial economic factors about which to ask the Federal Reserve what it is expecting. Of course, the broad ag-

gregate economic indicators, like GNP, price inflation, employment and industrial production, would be central here.

But I also want to suggest one more factor that I almost never hear mentioned in this context but that I think is very important. Monetary policy has a large influence not only over the total amount of economic activity but also over its composition. The particular aspect of that composition that I have in mind is the split between consumption and investment in the sense of capital formation. We hear a lot about capital formation in the context of budget policy, and appropriately so, but we almost never hear anybody asking the Federal Reserve about its aims in terms of the composition of output between investment and consumption. In a decade in which capital formation seems to be a major economic policy objective, I think that that would be a useful item to include on the list.

Mr. PATMAN. And you identify that as financial data?

Mr. FRIEDMAN. No, I call it nonfinancial. It is as simple as asking, of the economy's total output next year, how much does the Federal Reserve believe we will devote to capital formation.

Mr. PATMAN. But interest rates, of course you recognize, are financial data?

Mr. FRIEDMAN. Yes sir, certainly.

Mr. PATMAN. Thank you, Mr. Chairman.

Chairman FAUNTROY. Thank you.

You have all suggested, gentlemen, that the M_1 aggregate has become flawed as a target because of the financial innovations, and I wonder how serious, in your judgment, is that target now flawed? Will things get worse with time or will the pace of innovations flow in a fashion that a revised M_1 would be appropriate as an approximate target?

Mr. MCKINNEY. May I suggest that Dr. Paulus' study is an extension of one that I did a couple of years ago, and I was not able to update. But it showed that during the midseventies there was an increase in the volatility of velocity, which I interpreted in precisely the same way that Mr. Paulus did, that in the midseventies there was weakening of the significance of money in this context. And Mr. Paulus extends that.

Currently there has been another weakening of the money in this context. I think it is serious.

Mr. PAULUS. I think the single most important reason why we have had a weakening in the relationship between money and economic activity has been that we experienced a series of bouts with record high interest rates. In 1973 and 1974 we had record rates. At that time I was working for the Fed, and we spent a good part of 1975 and 1976 trying to understand what had gone wrong, why we were getting so much growth in nominal GNP and real GNP with so little growth in money. We examined several hypotheses, one of which was that those very high rates encouraged corporations especially, but not only corporations, to make major changes to their payments practices, because the opportunity cost of holding noninterest-bearing cash was so high. We went out and beat the bushes. We sent staff out to talk to professional cash managers. And our suspicions were, if not confirmed, at least supported. Cash managers told us that in 1974, 1975, and 1976, they did make major

efforts—especially in 1974 and 1975—to try to manage their money more efficiently.

Since then, of course, in the late winter of 1980 we experienced record rates again. Then, in the spring of 1980 we observed a major so-called shift in the demand for money, a big drop in money supply at a time when interest rates were falling, which is very unusual. Again, in the spring and summer of last year, 1981, very high rates were followed by a significant reduction in monetary growth relative to expectations. What happened, of course, is that money turned over more rapidly during these periods. Then, as I noted in my comments, we have had the introduction of NOW accounts, which is a technical factor, not directly related to interest rates. But they have, I believe, probably pushed the growth rate of money up 2 to 3 percentage points in the last 18 months.

The answer to the question then, will this relationship continue to deteriorate, depends on what you think is going to happen to interest rates. For the foreseeable future, the next, let us say, 12 months, I think rates will remain high by historical standards but short rates will not go back to their record levels of the spring and summer of 1981. And I expect that M_1 will probably be reasonably well behaved over the next say 12 months. Beyond that, the stability of the relationship between money and economic activity depends on where inflation rates go. If they move back to record levels, we will have additional serious problems with the stability of this relationship.

Mr. FRIEDMAN. Mr. Chairman, I agree with John Paulus. I believe that we have seen a pronounced deterioration of the relationship between M_1 and nonfinancial economic activity. I also agree that in the past the two major episodes of deterioration have both been linked to high interest rates.

But I think it is too optimistic to think that the only factor that could make this happen again is a further bout of high interest rates. That would be sufficient, of course, but I can think of several more examples. For example, suppose we implement a point-of-sale electronic payments mechanism in the United States. Nobody has a good idea what that would do to the holding of M_1 balances. We know that M_1 would decline, but who can say whether by 20 percent or 40 percent? Another example would be the further internationalization of the U.S. money and credit markets. If anything, we have seen surprisingly small effects so far from the international banking facilities that U.S. banks now have, but it is quite possible that a major move toward further internationalization would lead to money balances being held at facilities that are not included in the U.S. banking system.

Hence I think it is too optimistic to say that the M_1 problem would go away if only interest rates would stay down.

Mr. PAULUS. Let me add another pessimistic note. If banks and thrift institutions were permitted to run their own money market funds, the concept of M_1 would basically disappear, because a fair amount of demand money would move into money market funds as the banks tried to beat regulation Q. That could basically obliterate M_1. I do not expect any of these things, including electronic banking, to happen in the next 12 months, but I agree that there are things other than interest rates influencing the stability of M_1. But,

if I were to put one thing, I think that is the one sufficient condition which would break the relationship again.

Chairman FAUNTROY. I want to yield to the gentleman from North Carolina.

Mr. NEAL. Just on this point. I am just curious if, instead of focusing so much of our attention on M_1, we could not just talk about money generically as something to spend, which is what we are trying to target with M_1 anyway. I mean, M_1 is going to change. We have all pointed to that many times over the last several years. But it seems to me that if we would just shift our thinking a bit to something that we could define generically as money, we could find that relationship remaining stable and projectable over time.

And that is the most important thing, is it not, that we find a relationship which is stable and predictable, and something that we can target and control within some reasonable timeframe?

Mr. FRIEDMAN. Yes sir, I think that that is the idea. But my understanding is also that the M_1 aggregate is meant to be currency plus transactable balances. One example of the kind of subtle distinction that has to be drawn in this context is the treatment of money market fund shares: Should we or should we not include checkable money market fund shares in transactions balances, and hence in M_1?

Mr. NEAL. That is the point. Why not base that on empirical data, say either yes or no, yes we should include a certain percentage of that, which is my understanding of what the Fed is now doing. They are trying to make these kinds of judgments, and they are not perfect. But it is better, it seems to me, than throwing everything out. That is, it is better to try to recognize empirical data and changing conditions as they occur, but still not say, let us not target this, because if we stop targeting something we are going to lose control. And it is the control that we want.

I am curious also, Dr. Firedman, if there is a stable and predictable relationship between your measure of total net credit and M_1 as we have known it—my point being that if there has been, then I would ask the question: What is the difference? Or maybe yours is superior and the time lag is less than with M_1.

Mr. FRIEDMAN. No, sir. I want to be careful not to claim that total net credit is clearly superior to M_1. If it were, I would not hesitate to say so, but I have not shown that. Yes, M_1 and total net credit are correlated, to be sure, just as M_1 is correlated with M_2 and also with bank credit. Nearly all of these series have some rough covariation, not only in the sense of a common trend over time but also over the course of business cycles.

The idea is to pick out aggregates that are more reliably related to nonfinancial activity than others. Among the M's, it does seem that M_1 is the best. On the credit side, total net credit does better than anything else. Then the question is, are the two so perfectly correlated that looking at one tells what is happening to the other? The answer is clearly no. The two move roughly together over time but with far less than perfect correlation. Hence there is independent information in looking at the two individually, rather than only one.

Mr. MCKINNEY. May I suggest a slightly different view on that, because I do obviously hold a different view? I think that the ques-

tion of having some technician down at the Federal Reserve—some fellow with a computer program—figuring that, say, 37.2735 percent of money market funds ought to be counted as transactions balances and all the others will not work. That seems to me to be what we could describe as spurious precision. It is roughly the same thing as trying to cut down a redwood tree with a chain saw versus a razor blade. You can obviously get better fine tuning with a razor blade, but I would contend that it is inappropriate to waste that focus of attention at that level. Instead of trying to target M_1 overtly, I think we ought to be moving away from it in one direction or the other. We ought to be trying to be old-fashioned with reserves. We ought to have a broad aggregate and let the Federal Reserve play whatever game it wants to between those, but do not target something that you have to redefine or arbitrarily impose a percentage allotment to as a major arm of our macroeconomic policy.

Chairman FAUNTROY. Mr. Lowery, do you want to vote?

Mr. LOWERY. Yes, we should vote.

Chairman FAUNTROY. Let us recess for 5 minutes.

Mr. NEAL. None of you have mentioned the monetary base. Is that not something worth pursuing?

Mr. MCKINNEY. No.

Mr. FRIEDMAN. In quick, Mr. Neal, the monetary base, as no doubt you know, consists of three-quarters part of currency and only one-quarter of reserves. And nobody knows who holds the currency. The currency outstanding in the United States is equivalent to $500 for every man, woman, infant, retired person. Nobody has the remotest idea who has got that currency, what it is being used for. And when we speculate on what the possible—also, an enormous amount of it is in hundreds and thousands.

So if we speculate about what it is being used for, we can come up with ideas, but they do not have much connection to the ordinary objectives of monetary policy. So that an aggregate that is three-quarters currency just does not appear to have much promise, and the data bear that out.

Chairman FAUNTROY. We will suspend these hearings for 5 minutes while we vote.

[Recess.]

Chairman FAUNTROY. The subcommittee hearing will resume.

Dr. McKinney, you stated that the use of targets should be result oriented.

Mr. MCKINNEY. Yes, sir.

Chairman FAUNTROY. And not process oriented, and that we in Congress really ought not to be sidetracked into prolonged commentary about the technical details of how the central bank achieves the goal. Let me talk to you about the goals. As you know, when the Fed appears next week we will probably hear considerable discussion about the targets for the M's. These M's are an effort to achieve some particular economic objective that is usually stated in broad terms: Lower inflation, more employment, greater investment, and so forth. Would it be practical to have the Fed discuss these objectives in more specific terms, such as levels of employment, rates of inflation, rates of interest, productivity and real income? These items I have picked are right out of the monetary

policy section of the Humphrey-Hawkins Full Employment and Balanced Growth Act and are supposed to reflect the matters considered when setting monetary policy.

Mr. McKINNEY. I would think that specifically that is what this subcommittee and the Federal Reserve should be talking about. This should not be a discussion of detail. Your relationship to the Federal Reserve should not have to do with the day-to-day operations, how they get the currency put out to the Federal Reserve member banks or how the banks get their currency from the Federal Reserve banks. You should be talking about what is the most important thing, and that is a mutual judgment as to the best objectives to be shooting for. Essentially, the Federal Reserve can do only one thing, and it can do more or less. It can influence a faster economic growth or a slower economic growth. It can influence more inflation or less inflation. But it does it all at one figure. There is only the one thing that they can do.

I would think that that ought to be the focus of the discussion, what it is that they plan to do, what do they think they will be able to do, and what are the alternatives. What would an easier policy accomplish, what would a tighter policy accomplish? Then you and they should discuss, with your oversight authority and responsibility, whether they are trying to do the right thing or not. You should not discuss with them how they do that thing, except in a review fashion perhaps, a board-of-directors-type concern. But the idea of the central bank reporting that they expect to achieve 2½- to 5½-percent rate of growth of some aggregate that is largely estimated anyway seems to me a horrible waste of the time of this committee and of the Federal Reserve and a red herring that pulls your attention away from the important issue of what it is you are trying to do.

Chairman FAUNTROY. Dr. Friedman, Dr. Paulus, would you care to comment on that as well?

Mr. FRIEDMAN. Yes, sir. I certainly agree that a primary emphasis, if not the primary emphasis, of hearings such as the one that you will have with Chairman Volcker next week should be on the nonfinancial objectives that monetary policy is pursuing and the results that the Federal Reserve people expect to achieve. The problem, however, is one of accountability. If the Federal Reserve in good faith announces targets or objectives for the nonfinancial economy next week, and a year goes by and the result is entirely different, then for the Congress to exercise its responsibility somebody has to determine whether that result happened because the monetary authorities did not do the right thing, or because the fiscal policy pursued by Congress was on a different track and predominated, or whether yet some different matter intervened.

The experience that we have had, for example, with the Council of Economic Advisers' reports over the past two decades should show everyone that no accountability whatsoever comes from just asking somebody to show a set of forecasts for the nonfinancial economy for the next year. The forecasts inevitably are not met, and then the question is why.

The role of the targets which the Congress some years ago asked the Federal Reserve to announce in advance is to provide at least

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some imperfect way of determining whether the Federal Reserve is doing its part.

Mr. PAULUS. I would only add, Mr. Chairman, that I think it is important that the Fed have intermediate targets. I think it is important that they have a monetary target. They serve as an important disciplining device on monetary policy.

On the matter of publishing nonfinancial objectives, in an ideal world I think that ought to be done. But I fear that that sort of requirement would degenerate into the kind of game playing, frankly, that goes on in projecting Federal budget deficits 2, 3, and 4 years ahead; that the correlation between the stated objectives and the final outcome of policy would be very low. And the Fed in fact probably would lose a fair amount of credibility, by being required to publish such objectives if in fact it turned out that the actual results were systematically different from stated objectives, as I suspect they would be.

Chairman FAUNTROY. Dr. McKinney, you suggested that the nominal GNP might be the best target. You also pointed out, however, that there are some problems with that target. So I would like to ask you whether other mechanisms, linkages if you will, might serve as a proxy for nominal GNP. I would like to try to put it into the context of the tools available to the Fed. They cannot very readily control GNP per se, but they might be able to control credit, interest rates, money supply, or some other economic variables which might be measured directly or indirectly. What I am looking for is some variable to target that might more appropriately reflect total economic activity.

Mr. MCKINNEY. You do need a linkage from the Fed's pushing of a button to the impact on nominal gross national product. I think that nominal GNP is what you ultimately are shooting for, because I do not think the Federal Reserve can influence directly the split between real GNP and inflation. I think that your ultimate objective is something like nominal gross national product. Between the Fed's Open Market Committee meetings and the influence on gross national product, if you want some intermediate target that they can work with, some day to day guide to use, I would suggest that going back to the once-used target of free or net borrowed reserves would be vastly superior to targeting any of the M's, because it is more reflective of both demand and supply conditions.

M_1 or M_2 or M_3 relate to the supply of money and have something to do with the supply of credit. They do not have anything to do directly with the demand for credit. Free reserves or net borrowed reserves reflect the degree of pressure being felt by the market and thus are an indication of the degree of tightness or ease in markets. I would think that for the Federal Reserve's own purposes to use the free reserves as a guideline or to shift around among the M's as a guideline would be perfectly fine. There is nothing simple about monetary policy, as you in your positions certainly know, and there is no way that you can get away from the fact that when you sit down with the Federal Reserve you are talking serious, complicated, no-easy-answers things. I think that looking for an easy answer that says, if the Fed achieves 2.3 percent of anything, is bypassing the responsibility of a mature discussion with the Federal Reserve that says, these are the things that we

would like you to be doing, and then hear from them, these are the things we would like to do.

I think the direct answer to your question was, free reserves is a good thing for the Federal Reserve to use in getting to those objectives.

Chairman FAUNTROY. Dr. Friedman and Dr. Paulus, you both have advocated the adoption of a credit aggregate target. As you know, the Federal Reserve flow of funds report, which would presumably provide the basic data for such an aggregate, is not available until several months after the period in question, and it is still subject to substantial revisions for months after this. How could monetary policy be conducted under such conditions, and how feasible would it be to require more timely data on credit aggregates? Second, how accurate would those aggregates really be, and what would be the reporting requirements for the various types of lenders who would be reporting that data?

Mr. FRIEDMAN. I will say something about that, Mr. Chairman. This is an issue which I addressed in part in my prepared statement. It is certainly correct that the flow-of-funds statistics provided by the Federal Reserve appear only once a quarter and, typically with a lag of about 6 or 7 weeks. It is also true that there are sometimes important revisions after the fact in the flow-of-funds data.

Let me address both of those questions—first the timing, and then the reliability of the data. First, on the timing, although the flow-of-funds publication comes out only once a quarter, the great majority of the underlying series are in fact monthly series. The Federal Reserve simply chooses to publish the numbers in that form only once a quarter.

For the total net credit measure that I advocate using, 89 percent of the total is available each month in a fairly prompt way. The ironic thing is that, of the remaining 11 percent that is missing, much of it has nothing to do with imposing further reporting requirements on the private sector. Most of what is missing is data on the lending activities of the Federal Government and its sponsored agencies. Hence if the Federal Government were merely to follow the reporting requirements it already imposes on the private sector, something in excess of 98 percent of the total would be available. For all practical purposes, therefore, the total net credit aggregate either is or, with some small effort from the Government (but not the private sector), could be available monthly.

I also checked to see whether the loss of even the 11 percent that is currently not available monthly matters very much. The answer is it does not. The relationship between what is available monthly in the credit data and nonfinancial economic activity is just as good as that for the total. Hence I think the timing of the data is not a problem as it exists now—although to be sure, getting the reports speeded up would always be helpful.

The reliability of the data is a question that I am currently working on, and I hope that by the end of this summer I will have an answer. As I said before, we know that the flow-of-funds data, and therefore the underlying monthly credit data, from time to time get revised after the fact. Similarly, we know that the money data also get revised after the fact, especially the within-year money

data that have to be seasonally adjusted. It is not the case that the credit data get revised and the money data are perfect. It there is a bulge in M1 announced this Friday, by the end of the year that bulge may disappear from the data entirely. The question is relative reliability.

This summer I have employed a team of Harvard undergraduates to collect back data and compare the first reports of the money data with the eventual final data, and then the first reports of the credit data with the eventual final reports. By the end of the summer I hope to have an answer.

Mr. PAULUS. I propose to use private nonfinancial borrowing as an indicator or a target, which is just a subset of what Professor Friedman has proposed. Therefore, his comments are all relevant to the data problem of the indicator that I proposed. Needless to say, I have nothing to add to what Ben has already said.

Chairman FAUNTROY. Congressman Lowery.

Mr. LOWERY. Let me ask you some basic questions. With the rate of inflation in the 4- to 6-percent range, why are interest rates 10 to 13 points higher? You are all going to get a shot at it.

Mr. MCKINNEY. I did a study on that subject just recently and traced back interest rates and inflation over a century or so. I find that there is a marked difference between the relationship between inflation and the interest rates in the postwar years and that in the prewar years. In the postwar years, which is what you would normally put into a computer in order to get the relationship between the two, there has been a fairly close correlation between the two, with a lag of a couple of years. So that if you just run out a straight computer comparison of the past 30 years, it says that interest rates move in consonance with and roughly in the same magnitude as inflation. Rates change after a couple of years, a couple of years behind the inflation rate.

But back in the years before the fifties the Nation followed a different policy that may be more similar in many ways to the policies that are being followed now. We fine tuned the economy in the postwar years. We did not fine tune the economy in the prewar years and we are not now fine tuning the economy. So, we may get more indication of the relationship between interest rates and inflation by looking at an earlier rather than a later period.

Mr. LOWERY. Are you saying there is currently a 2-year lag?

Mr. MCKINNEY. There is still roughly a 2-year lag, but there is a big difference in the prewar performance. Let me give one illustration and then I will stop. Taking a 3-year compounded moving average of the inflation rate so that it reduces all of this flopping around, the inflation rate from 1918 to 1920 was a compound 16 percent. In the next 3 years, from 1920 to 1923, it was a minus 5 percent. That is a swing of 21 percentage points in the inflation rate compounded over a 3-year period. But interest rates did not move anything like that magnitude. They declined, but AAA corporate bond rates declined only from an average of 6.12 percent in 1920 to 5.12 percent in 1923. You can get very similar results in each of the inflations periods during the past century.

My conclusion from that is when we are not bothering to try to fine tune, you get something that looks like a couple of telephone poles—inflation, with slack wire—interest rates strung between

them. The reduction in the rate of inflation is big and the reduction in interest rates is of comparable magnitude, but it takes quite a while for it to have its full impact. I think that we have been overly optimistic about how long it would take for the public and for interest rates to adjust to the reduced inflation rate.

Mr. FRIEDMAN. I have no very good answer to your question, Congressman. I do not know why interest rates are so high.

Mr. LOWERY. Dr. Paulus?

Mr. PAULUS. I would cite two reasons. One, the policy mix; we have a stimulative fiscal policy, and a tight monetary policy. Evidence of the tightness in monetary policy, can be found in the fact that the real money stock has shrunk in the last year, the fact that private borrowing is running about $100 billion below its normal level right now, the fact that the dollar is so strong, and so on. Fiscal policy pretty clearly is moving dramatically toward stimulus, which means it will be absorbing an increasing share of our net savings. That is one reason why I believe we have real rates. Professor Friedman is right. Nobody really knows why. But I think the policy mix is a good candidate.

Second, and probably more importantly, I believe the deregulation of the financial system in the last few years has moved the burden of constraining borrowing and economic activity from the supply side of the financial markets to the demand side. When we had ceilings on bank deposits, on mortgage instruments, on consumer installment borrowing, we merely have to push interest rates above those ceilings in order to make lending into those markets unprofitable. Consequently, a bank would not sell a CD and pay, say 12 percent for money to lend at, say 10 percent. The supply constraint could occur when real interest rates were relatively low, as it did in 1974, a year when real pretax rates were zero, real after-tax rates were substantially negative. Yet in part because interest rates had moved well above deposit ceilings, and ceilings on mortgages and installment credit, there was a severe contraction of credit.

We have deregulated the financial system, which means that the burden of slowing borrowing falls equally on the demand side of the market, which in turn means that interest rates have to be high enough to bite, especially on an after-tax basis.

Now, you cited the difference between interest rates and inflation. You might want to think about the difference between after tax interest rates and inflation, because if a corporation can borrow at 14 percent in the commercial paper market, and in point of fact it can borrow at 13 percent in the paper market right now, after taxes, that is going to cost the corporation about 7 percent. But this is probably just a point or so above the basic inflation rate. So, you are correct.

Mr. LOWERY. We adjusted the tax rates, in fact, not only for corporations, but even more dramatic was the reduction in maximum rates for individuals. It doesn't make the differential quite so attractive after taxes. We have cut the maximum rate from 70 percent to 50 percent, for instance.

Mr. PAULUS. That is correct, so the real after-tax borrowing cost today is higher than average for corporations partly because of the policy mix, because the Fed is trying to restrain the economy. For

consumers, according to a study I did recently where I looked at the percentage of households who do deduct interest from taxes and the percent who do not, it turns out that about 60 percent of household borrowing is done by those who do deduct interest from taxes, and you should use the after-tax rate for them, and use a pretax rate for those who do not.

The cost of borrowing for households today is very high according to my study, but the deregulation of the financial system, I believe, is probably the single most important contributor to what looks like high real interest rates, but which are not so high on an after-tax basis. Rates will probably not decline very much any time in the next couple of years, because on an after-tax basis current rates are high enough to hurt, but at two percentage points lower, probably will not be high enough to hurt much on an after-tax basis.

Mr. LOWERY. Dr. Friedman's cousin, Milton, suggested the reason we have 16- to 17-percent interest rates is that there is a 50–50 chance that inflation in a year will be 5 percent or it could be 25 percent, and due to our fiscal and monetary policies, 16- to 17-percent rate is about in the middle, and is an indication of risk.

Mr. PAULUS. Well, inflation 2 or 3 years from now is important for the bond market. It is not very important for the money market. In fact, it is of almost no importance for the money market. We have short-term interest rates at current levels because of a shortage of money. We have relatively high long-term interest rates in part because of the budget impasse, because people in the markets are concerned about where inflation might be in 3 years to 5 years. They are not convinced that the progress we have made in the last 2 years will be sustained. So, I do not think we have high interest rates today only because of great fears about future inflation. I believe we have high short-term rates because the Fed has been shooting for a monetary target which is below the inflation rate.

Mr. LOWERY. Do you mean to say there is really no long-term borrowing?

Mr. PAULUS. There has been no long-term borrowing to speak of, not in the United States. There has been a fair amount in the Euromarkets.

Mr. LOWERY. Would someone else choose to comment on Milton Friedman's assumption?

Mr. FRIEDMAN. Yes; I would agree with what John Paulus said. The idea that interest rates are high because of fears of future inflation is one of the many plausible explanations of why long-term rates are high. Our problem is that there are many possible explanations for why lay-term rates are high, but there are no good explanations for why short-term rates are so high. As John Paulus explained very well, the fear of inflation 2 or 3 years down the road is not a satisfactory answer to why 3-month interest rates are so high today.

Mr. LOWERY. Dr. McKinney, you suggested earlier that when the Fed overshot the targets interest rates went up, and when they came in below the targets for M_1, they fell. Let me suggest something. What if the Fed artificially sets high rates, and comes in below? What impact do you see that having?

Mr. McKINNEY. You mean if the Fed were to raise its targets a half a dozen percentage points, and still came in below?

Mr. LOWERY. I mean, is it that subjective?

Mr. McKINNEY. If the Fed is expected to try to achieve its targets, and were currently running below those targets, the market would be aware that the Federal Reserve would have to take actions to raise money growth or it would not achieve that objective. One of the big objections to money targeting is that you know that if they are going to shoot for those targets they will have to ease if money growth is below target. Similarly, when money growth is above targets like it was up until recently, you knew that they either had to not achieve the targets they said they would achieve or that they had to permit easier conditions in order to get back inside their range. It is that subjective, yes.

Mr. LOWERY. Mr. Chairman, just one final question.

Chairman FAUNTROY. Certainly.

Mr. LOWERY. I will assign to each of you the role of financial mogul, if you will. The powers of Paul Volcker, Ronald Reagan, Don Regan, and the U.S. Congress all rolled into one. What would you do to reduce interest rates? When would you expect them to come down, and to what ranges?

Mr. McKINNEY. What I would do to reduce interest rates would be to start with Mr. Paulus's point of taking actions that would convince the public that in fact the U.S. Congress and the administration does intend to try to cut Federal spending and to reduce the inflationary pressures emanating from Government. To take actions that would convince the public that you were going to do that would have more effect than any other one thing. Second, I would try to reduce the deficit and the pressure on the borrowings. Third, I would continue a policy very much like the Federal Reserve is now doing. I would expect rates to decline rapidly as people became convinced that that was what was going to happen, which might startle even me as to when and how much. I think that a full adjustment will take a few years. You are not going to see interest rates 3 percent above the inflation rate in less than 4 or 5 years, but we would move much more rapidly toward that.

Mr. FRIEDMAN. I would support most of what Dr. McKinney said, and I would add one further element. I think that the time has come for the Congress to recognize that the tax bill it passed last summer was excessive, and that a 3-year tax cut of that proportion was a mistake. It is also a mistake now to continue with it. I see no point in revoking the tax cut that we just had 2 weeks ago, because the economy is either still in or just past a recession. The deficit that we have now is at least half a passive deficit, due the shortfall of revenues and extra spending associated with the economy's weakness. This is not a time to increase taxes.

But I also believe that, as we move on into next year, and especially as we cross July 1 of next year under current arrangements, the deficit will not become smaller but will increase. Moreover, it will be more and more an active deficit, and a major part of the story is the series of tax cuts legislated last year.

Even in terms of the supply-side philosophy itself, people should recognize that the main elements of a supply-side tax policy are now in place. The maximum rate is down from 70 to 50 percent. If

there is to be some impact on personal savings and investment decisions, surely that is where it is going to come from. Business tax cuts, with the exception of the ambiguities over safe harbor leasing, are firmly in place. I see no merit in continuing to go on with a program which next July would reduce Federal revenue by close to yet another $50 billion per annum, and even more in subsequent years.

Mr. LOWERY. What do you mean by passive deficits?

Mr. FRIEDMAN. I mean by passive deficits the opposite of what are often called full employment deficits. Until 2 weeks ago, it was fair to say that, if the economy had been at full employment, the deficit would not have been very large. Now that taxes have been reduced, that is not quite so true. After July 1 of 1983, we could be at full employment and the deficit would still be huge.

I accept what George McKinney said, but I think that eliminating that third piece of the tax cut would be a very useful thing to do.

Mr. LOWERY. Assuming we follow your suggestion, what range would you see interest rates in?

Mr. FRIEDMAN. I am not an interest rate forecaster, as these gentlemen are, but the answer is lower.

Mr. PAULUS. I have nothing to add to what my colleagues said. I agree with both of them.

Mr. LOWERY. No quick fixes?

Mr. PAULUS. No.

Mr. LOWERY. Thank you very much, Mr. Chairman.

Chairman FAUNTROY. I would like to return for a moment to the use of credit aggregate as targets for a couple of questions, and then we will be through. One of the criticisms that has come to this suggestion is that the stable relationship which you find between the nominal GNP and total domestic nonfinancial credit is due as much to the effects of changes in nominal GNP on credit and debt as it is to the impact of the changes in credit and debt on the GNP. In other words, the Fed, by targeting the credit aggregate, would be likely to meet its ultimate goal on nominal GNP growth before it met its proximate goal, the growth in the credit aggregate. How would you respond to that criticism? Dr. Paulus? Dr. Friedman?

Mr. FRIEDMAN. I have done some work that bears exactly on this question, so I will be glad to try to answer, Mr. Chairman.

The very first thing to say is that unraveling issues of causality in economics is a very tough business. The techniques that we have are highly imperfect, and we should be cautious of thinking that we know with sharpness anything on this subject.

Having said all that, I think that the data that I have examined simply suggest otherwise from what this line of criticism implies. In particular, the relationship between credit and nonfinancial economic activity is not just a one-way street by which nonfinancial activity induces credit developments. It is not a one-way street in the other direction either, of course. There is mutual causation. If people decide to spend more, then the evidence suggests that they will also borrow more. There is also evidence showing that, if people borrow more, then they will also spend more. The causation goes in both directions.

Total net credit does therefore satisfy the second of the criteria for a good target that I suggested before—that the relationship not just be a mirror, in which at the target tells something that could just as easily be seen by looking at the nonfinancial economy itself. The total net credit aggregate does have predictive value.

I should also say that the evidence on what causes what between money and GNP is not so clear as most people seem to think either. There, too, there is substantial evidence of mutual causation. It is just not true that the causation runs entirely from money to GNP. There, as in the case of credit, money does affect GNP and GNP also affects money. The relationships seem to go both ways, in the case of both money and credit.

Chairman FAUNTROY. Anything to add?

[No response.]

Chairman FAUNTROY. Let me finally ask anyone on the panel, would you like to describe a possible operating scenario that employs a credit target in some form? How might such an operating procedure differ from the one we now have? Would it rely on the use of bank reserves, discount window operations, or credit policies? What might that system look like? I need that before I approach next week's hearing.

Mr. FRIEDMAN. I will try that one, too. I believe that it would be possible to implement a credit-and-money policy with the same kind of bank reserve operating procedure that we now have. The Federal Reserve would set a targeted rate of growth for money and a targeted rate of growth for credit, choosing both to be what it thinks are consistent with its objective for the nonfinancial economy. It would then pick the rate of growth of reserves that it believes to be consistent with targeting these two measures.

Then the question is, what if they miss the targets? If both are above target, that is a strong signal that they ought to tighten the reserve provision path. If both are below target, that is a good signal that they ought to increase the reserve provision path. If one is too high and one is too low, then that is a strong signal to go back to the drawing boards and try to understand why that has happened, rather than automatically ignoring one aggregate and pursuing the other, as would be the case if we had only a money only target and not a credit target.

Some work I have done recently has also addressed the question of whether we would be better off to have a Federal funds rate operating procedure, as we did in the 1970's, up until October, 1979. This is not a distinction between money and credit. It seems to be the case, at least in the evidence I have seen, that the Federal funds rate procedure was just as good as the reserves procedure for controlling money anyway; there was no good evidence to back up the October, 1979, change. In the same way that the Federal funds rate would probably do a little better in controlling money, it would probably do a little better in controlling credit. But I would be reluctant to couple the use of a credit target with any change in operating procedures in this sense, because it is not necessary. It would be asking for too big a change all at once, rather than an incremental change.

Mr. MCKINNEY. May I comment, sir, on the question of the Federal funds as a target? I am aware that there is a whole series of

studies that say that it does not really make much difference whether you target quantitatively or target through the Federal funds, but market experience seems to indicate otherwise. Maybe you cannot measure it, but you are aware of it in the market at the time that it is occurring. If the Federal Reserve is targeting interest rates, you get the same sort of thing that you get now if the money growth is below target. You now get the knowledge that the Federal Reserve will have to ease in order to get money back up again. With the Federal funds rate being used as a targeting device, whenever you knew that the Federal Reserve was going to have to shift to tighten or ease, you also knew that interest rates were going to have to move, and you had a special incentive to beat the Federal Reserve to it, because they protected you on one side of the market. Both borrowers and lenders knew which direction interest rates would be moving, because the Federal Reserve necessarily had to go through interest rates to affect changes in the rate of growth of money.

In my judgment, although I cannot confirm it and the studies do not confirm it, I think that in fact the Federal funds operating procedure did cause greater market perturbation and probably greater volatility of markets, although I cannot find it in the statistics. I do know that markets got more disturbed under the Federal funds targeting procedure whenever it became obvious that the Federal Reserve was on a money chase than they do now.

Mr. PAULUS. I have nothing to add to what Professor Friedman said about the implementation of a joint monetary credit target. Just a quick comment on Federal funds targeting. I think it would be a serious mistake to go back to Federal funds rate targeting, because it would once again put the Fed in a very vulnerable position. It would make it very difficult to raise interest rates when necessary to levels required to cool off the economy.

I believe the reason the Fed changed its targeting procedures in October of 1979 was not because they are an institution of monetorists, but because they wanted to have a little more flexibility and a little more freedom to let interest rates move higher if necessary. That experiment has worked. It is important that they have the flexibility to put rates at levels sufficiant to cool the economy off. This is particularly important in view of the deregulation of the financial system which I believe requires a higher level of real after-tax and pre-tax rates today to restrain borrowing. It is important that they have that flexibility in the future, and I would hope that they would continue to target money and credit through reserves.

Chairman FAUNTROY. With regard to the credit aggregate question, would there be any additional powers that you would think would be necessary, such as, say, reserves on assets or credit controls in order to make that work?

Mr. MCKINNEY. May I take advantage of the new question to clarify that my earlier comments about other possible targets does not mean to detract from my support for the credit aggregate as a good target. I think it is a good target and one of the good candidates. I would think that the use of either of the supplementary measures, asset reserves or direct controls would be strongly counterproductive, and I would hope that the Congress would avoid the

repetition and the experience of 1980 or of 1971 with controls. No changes in procedures seem to me to be necessary.

I mentioned earlier free reserves or net borrowed reserves as a possible short-term operating target. May I point out that, in effect, the Federal Reserve is now targeting free reserves and borrowed reserves by the means through which they attempt to supply reserves to the market. I would think no additional powers are necessary to achieve the transfer.

I am sorry, Ben. I know this is your real area, but I wanted to be clearly in support of it. I think it is a good idea.

Mr. FRIEDMAN. Mr. Chairman, neither of those additional powers would be at all necessary. Indeed, both of them would be counterproductive. I think that a credit aggregate target for monetary policy is fully implementable not only with the reserve operating procedure that we have now, but also without granting the Federal Reserve any additional powers whatsoever.

Mr. PAULUS. I wholeheartedly agree.

Chairman FAUNTROY. Gentlemen, I want to thank each of you for helping us a great deal to understand this particular issue. It certainly places the subcommittee members in a much better position to participate in the full committee hearing next week, and I myself have learned a great deal. Thank you so very much. We appreciate your taking the time and effort to come to Washington and share your knowledge with us.

[Whereupon, at 12:50 p.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[The following additional material was submitted for inclusion in the record:]

STATEMENT
on behalf of
NATIONAL ASSOCIATION OF REALTORS®
regarding
ALTERNATIVE TARGETS FOR MONETARY POLICY
to the
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY
U.S. HOUSE OF REPRESENTATIVES
by
DR. JACK CARLSON
August 14, 1982

I am Jack Carlson, Executive Vice President and Chief Economist of the NATIONAL ASSOCIATION OF REALTORS®.

On behalf of the nearly 600,000 members of the National Association, we greatly appreciate the opportunity to submit our views on the Alternative Targets for Monetary Policy.

RECOMMENDATIONS

(1) The National Association of Realtors® has in the past and continues to support the Federal Reserve's use of money aggregate targets as an effective method for controlling inflation. We further endorse the policy

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of gradual reduction in the rate of growth of money and credit to reduce inflation.

(2) We recommend this Committee consider instructing the Federal Reserve to use short-term interest targets in addition to and consistent with money growth targets, particularly during periods of time when the appropriate long and short-term monetary growth targets of the Federal Reserve are being met.

(3) We recommend to this committee that it consider recommending to the Federal Reserve that in view of the fact that reductions in money velocity have caused the monetary targets to be increasingly restrictive, the Federal Reserve should consider modifying the money growth targets upward during these periods of reduced money velocity. It is our recommendation that the targets can and should be increased by one percentage point for the remainder of this year and for 1983.

(4) We recommend to this committee that it encourage the Federal Reserve to set a suitable date for implementation of contemporaneous reserve accounting.

(5) We recommend to this committee that it recommend to the Federal Reserve that reducing information by which expectations on the short run money growth policy of the Open Market Committee are formed in the financial markets through averaging the weekly money stock measures is an inappropriate response to the problem of the formation of erroneous expectations. The plan to implement the averaging of the money stock

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measures should be cancelled. The Federal Reserve should implement measures to increase the information by which these expectations are formed and not reduce it.

(6) We recommend to this committee that it request the Federal Reserve to consider holding monthly briefings in New York and Washington for financial market economists, practitioners, and others whose opinions weigh heavily in the formation of investor expectations and report to the committee as to the feasibility of this proposal. The purpose of the briefing would be to reduce erroneous policy expectations in the financial markets particularly as they relate to factors that influence short and medium term policy modifications by the Open Market Committee.

SUMMARY

(1) Since late in 1979, major elements of Federal Economic Policy have been in direct conflict in that the Federal Reserve has pursued an anti-inflationary policy of credit restraint while the Congress and the Administration have pursued an inflationary policy of fiscal stimulation to increase economic growth and employment.

(2) The result of this policy mix is an unusual set of economic conditions, i.e., lower inflation, higher unemployment, and stagnant economic growth co-existing with high and volatile interest rates.

(3) High and volatile interest rates, by keeping the housing and auto industries, business investment and trade in goods and services depressed is preventing economic recovery and has inflationary implications for the future.

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(4) We agree with Federal Reserve Chairman Volcker that there has to be far more done on the fiscal side in reducing deficits before a sustained and robust economic recovery can ensue.

(5) Interest rate volatility is known to be a major factor in depressing credit dependent industries. This rate volatility has primarily been the result of an erratic growth path for money supply as represented by M1. The Federal Reserve's capacity to control the supply of credit in order to produce a steadily growing money supply is limited.

(6) The Federal Reserve should adopt, as has been recommended by its own staff, a contemporaneous reserve requirement system in order that they have greater short run accuracy in managing reserves to meet money growth objectives.

(7) The current economic conditions have confused the expectations of investors and consumers and they have responded to this by holding large amounts of liquid assets. This has caused changes in money velocity that have necessitated policy modifications by the Federal Reserve with respect to the monetary growth targets.

(8) These policy modifications have not been effectively communicated to the financial markets and have resulted in erroneous monetary policy anticipations by the markets. Interest rates have, therefore, been higher during the early part of 1982 than they would have been if policy expectations had been more accurate.

(9) The Federal Reserve should implement measures to reduce erroneous policy expectations in the financial markets, particularly as it relates to factors that influence short- and medium-term policy modifications with respect to monetary growth targets.

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(10) The economy is now poised for recovery and with inflation currently reduced the Federal Reserve should shift its priority from reducing inflation to encouraging economic growth. It now can safely allow money to grow at least one percentage point above the current target range. This is particularly the case with current high liquidity preferences and low money velocity. The result of this would be to further lower interest rates and relieve some of the pressure from the interest sensitive industries and thrift institutions. A more rapid economic recovery would result from this policy change.

It is the opinion of our Association that the use of targets for monetary aggregates by the Federal Reserve is an effective method for contorlling inflation. However, we also feel that real interet rate targets, more accurate reserve reporting procedures, and more information flow from the Federal Reserve to the public on short run Open Market Committee policy intentions would improve the Federal Reserve's contribution to increased employment and output.

Since late in 1979, the Federal Reserve has pursued a policy of bank reserve management for the purpose of regulating the growth rates of several monetary aggregates within prespecified annual target ranges. The policy was adopted as an approach toward reducing inflation by limiting the growth of nominal GNP. The theoretical justification is that, although there will be short-run impact on real output and employment from restraining money growth, the intermediate and long-term adjustment would primarily come out of the inflation component of nominal GNP which is the desired result. At the time, reducing inflation, which was growing during some months at annualized rates

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in excess of eighteen percent, had acquired a national constituency for making it the primary domestic policy priority.

Although the path of growth in the money aggregates has been volatile, their yearly growth has steadily declined over 1980, 1981, and the first half of 1982; and as consistent with theory, inflation has significantly declined. However, theory also suggests that interest rates should have declined with the reduction of inflation and the slowing of real output growth. This has not occurred. Interest rates and, particularly real interest rates, have reached and maintained record highs.

Figure 1

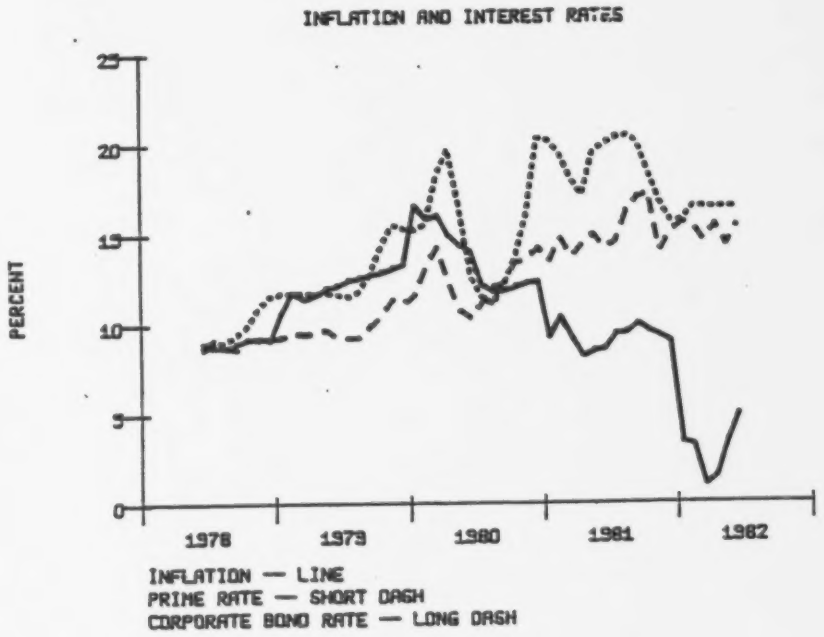

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Figure 2

PERCENT CHANGE IN REAL GNP

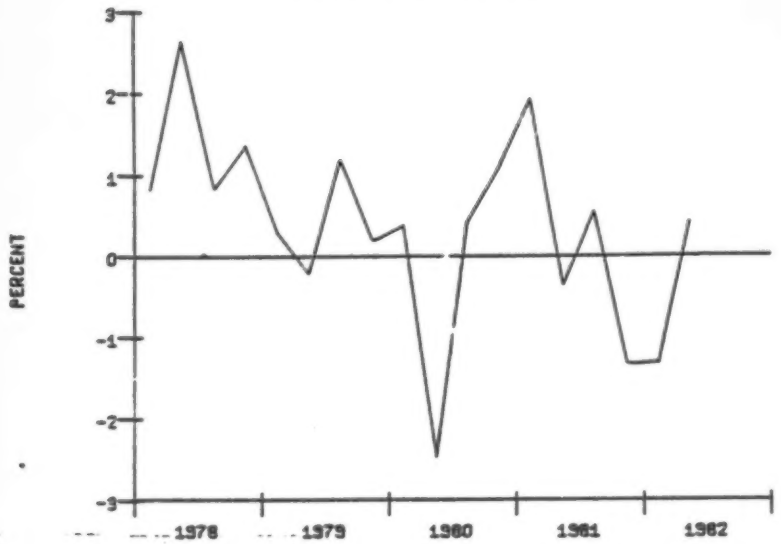

Figure 3

UNEMPLOYMENT RATE

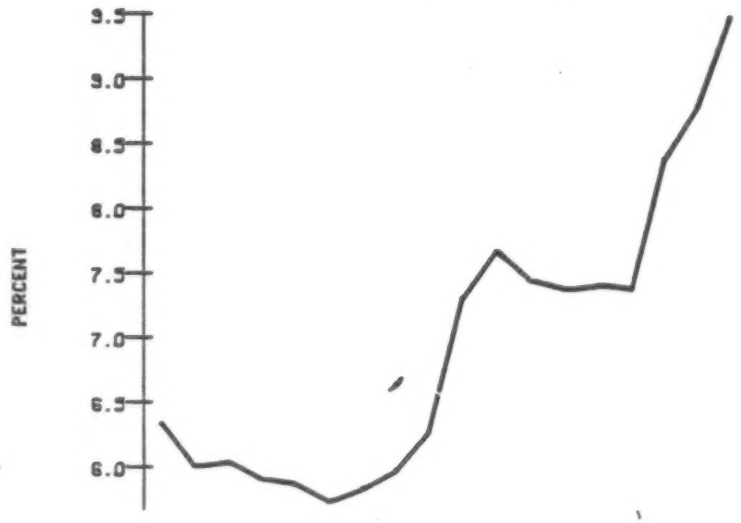

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Figure 4

M1 GROWTH COMPARED TO TARGETS

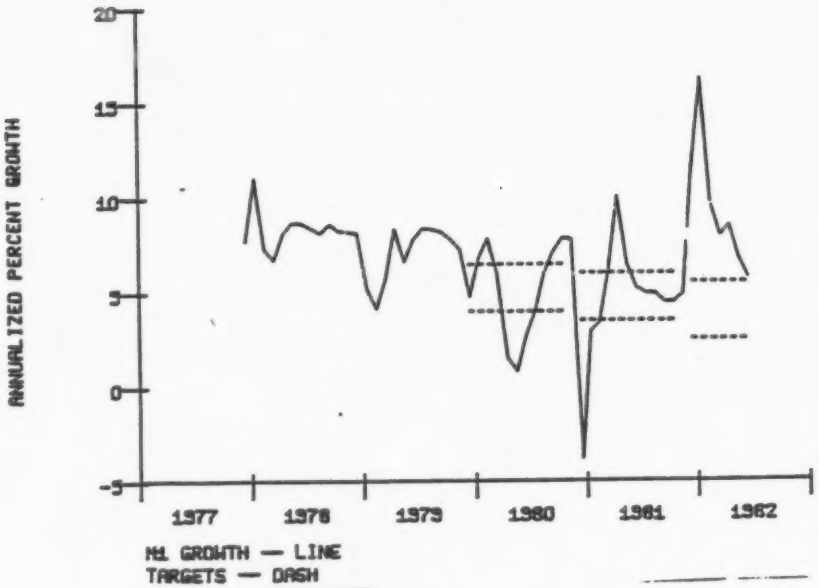
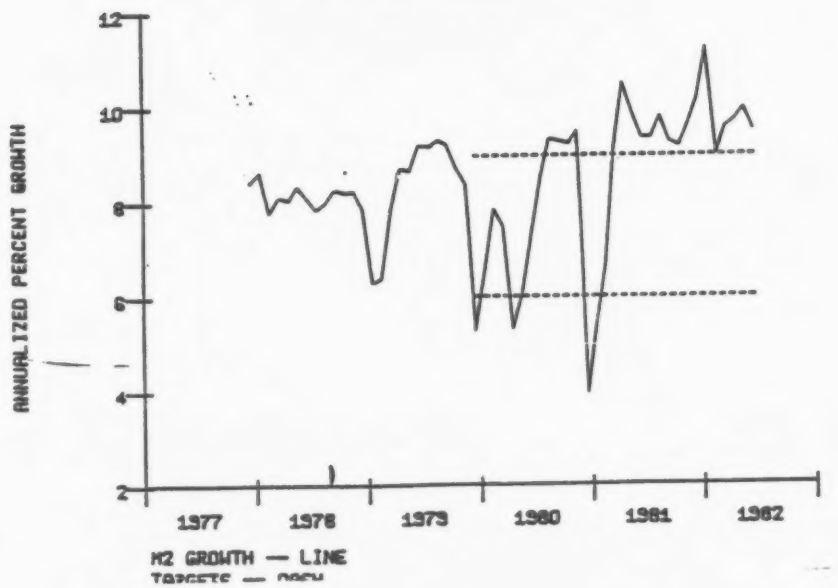


Figure 5

M2 GROWTH COMPARED TO TARGETS



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The primary reason for this departure from theoritical expectations is that while the Federal Reserve was pursuing an anti-inflationary policy of credit restraint, successive Congresses and Administrations have direcly contradicted this by pursuing a policy of fiscal stimulation to increase economic growth and employment. Because the demand for money generated by the large and accelerating borrowing requirements resulting from this fiscal stimulation is large relative to available money, and does not depend on levels of output and cost of funds, the private demand for money had to carry the burden of adjustment to this conflict in policy. Interest rates remain high, contrary to the expectations of theory, because the assumption in theory that the demand for money depends on the price of money and levels of economic output has not held. The high interest rates we currently suffer are in place to effect the downward adjustment in private demands for money in order that the large and growing public demand for money can be accommodated despite the policy of deceleration in money growth being implemented by the Federal Reserve. This conflict in Federal fiscal and monetary policy has currently left us with an unusual set of economic conditions: low inflation, high unemployment, and stagnant economic growth coexisting with high and volatile interest rates.

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Figure 6

THE FEDERAL DEFICIT

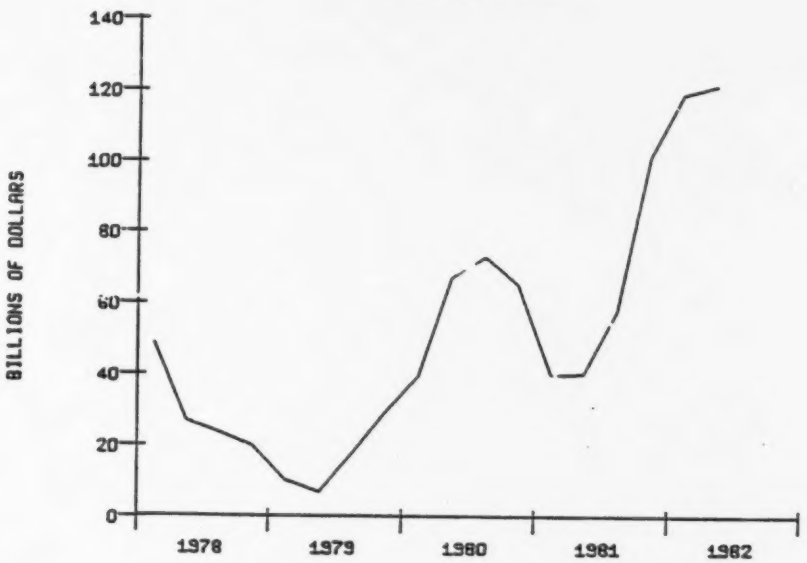

Figure 7

FEDERAL DEFICIT AS A PERCENT OF PERSONAL SAVINGS

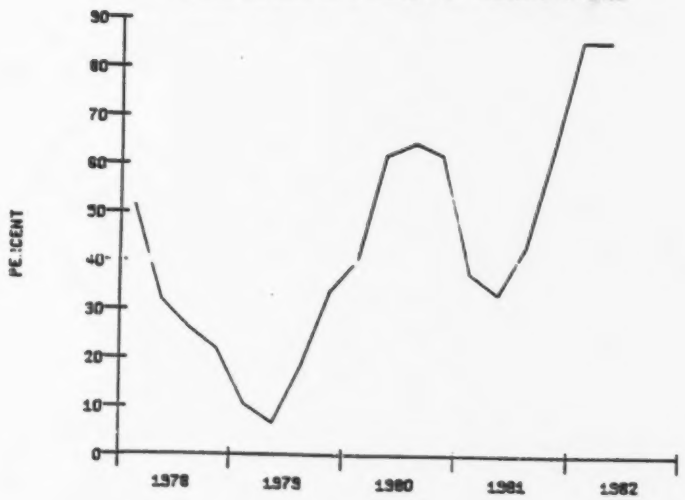

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Figure 8

FEDERAL DEFICIT AS A PERCENT OF
PERSONAL SAVINGS PLUS CORPORATE SAVINGS

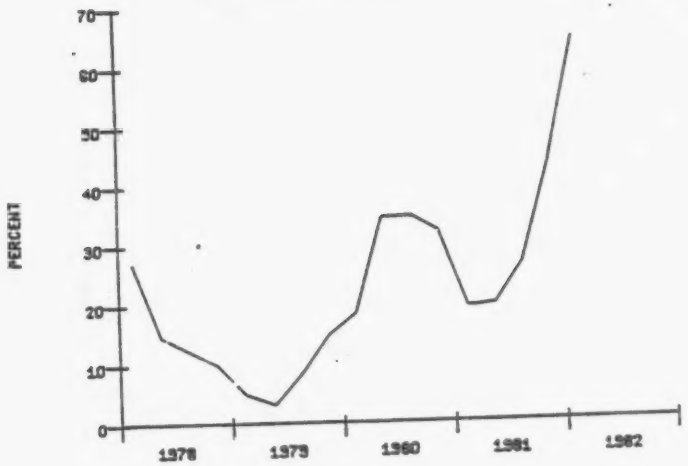

Figure 9

FEDERAL DEFICIT AS A PERCENT OF TOTAL PRIVATE SAVINGS

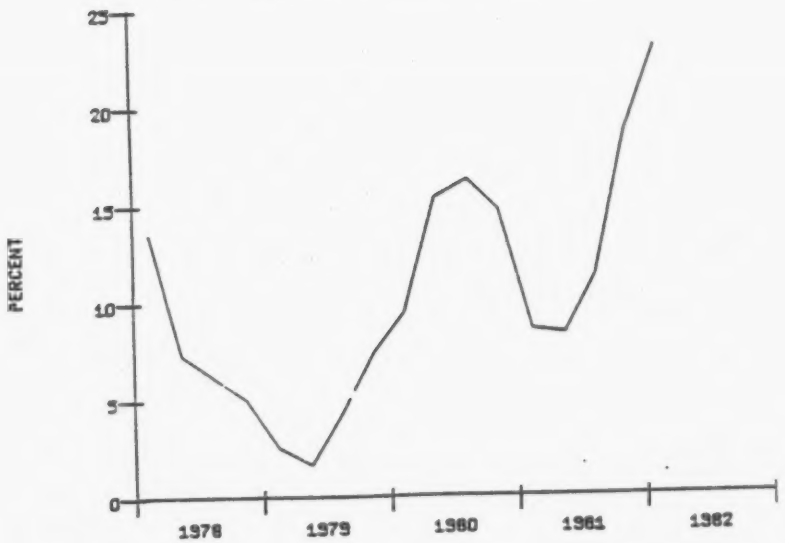

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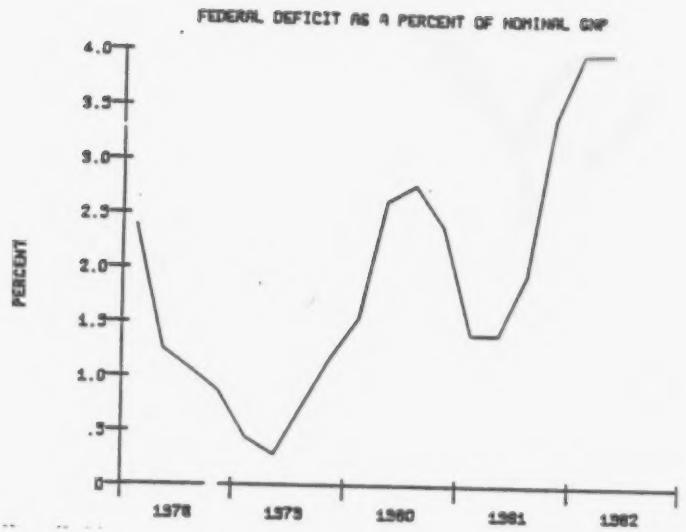
Figure 10



The adjustments forced on private borrowers have, in some cases, been unprecedented since the Great Depression, and no industry has suffered more than the housing industry. For forty months now, housing activity has declined, and this decline has accelerated during the last twelve months. More Americans during the last forty months have lost the opportunity to satisfy their home owner needs than at any other time in United States history. This includes the drop through the years 1929 to 1933. Home sales have fallen 55 percent (from peak to trough) in dramatic and stark contrast to the physical volume of other sales in the national economy which have dropped only about three percent. About 3.5 million households have been denied the opportunity to qualify for adequate housing of their own.

Figure 11
HOUSING STARTS AND HOME SALES

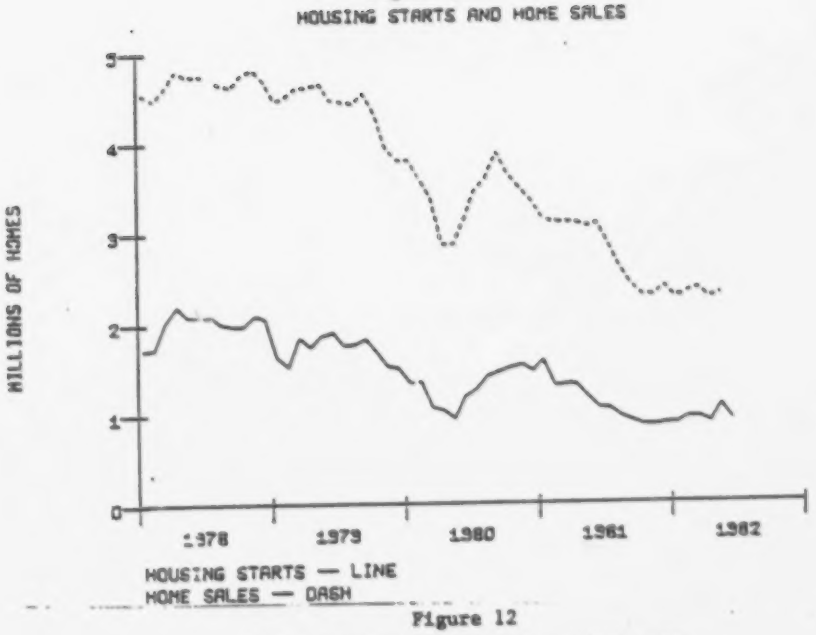
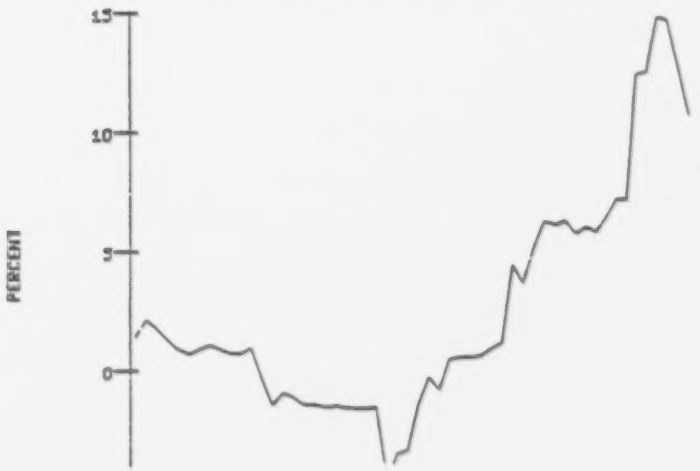


Figure 12
REAL EFFECTIVE CONVENTIONAL MORTGAGE RATE



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This loss has occurred while the demographic demand for housing is not significantly decreasing, even before considering replacement demand. The loss has not only kept would-be home buyers from achieving their dream of home ownership, but has caused home owners to lose as much as one-half of their investment in their homes. This loss occurred because real interest rates for new mortgages (interest rates after adjusting for inflation) have increased from the normal three percent level during the post-war period to highs of of 6.9 percent during 1981, near 15 percent in 1982, and 8.2 percent forecast for 1983.

The higher real interest rates, rising from three percent to above 14 percent, have caused a loss of at least 25 percent of the current marketable value of every American's home, as well as any other long-lived investment such as commercial, industrial, and agricultural real property. When one considers the average equity of people's homes is sixty percent, this means nearly one-half of all Americans' equity in their homes has been taken away because of high real interest rates resulting from this policy conflict.

Along with housing, other credit sensitive industries have been caught in the jaws of this policy conflict. The auto industry and other consumer durable goods industries are heavily affected. Industries that support housing and consumer durable goods such as lumber, steel, plastics, rubber, and others have suffered severe declines. With the general decline in output, and also because of the high cost of funds, investment in plant and equipment has fallen drastically. Prolonged depression in investment in housing and business structures and equipment will virtually guarantee high prices and lagging productivity in the future.

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Figure 13

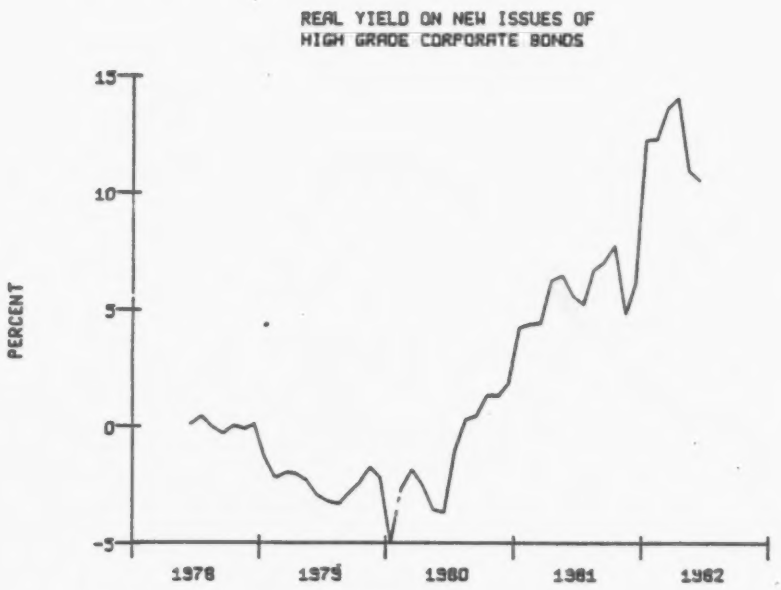

Figure 14

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It has always been known by all of us that the fight against inflation would not be an easy one. There was to be suffering by many in order to achieve price stability. But the method of solely relying on monetary policy as the tool to obtain price stability has resulted in the casualties being predominantly distributed in the credit sensitive industries. Nevertheless, substantial progress has been made in reducing the cost of production and there is now opportunity for strong sustained economic growth with more suitable prices.

Along with the fall in prices, real incomes have been steadily growing. Consumers have been liquidating their debt and the debt service to income ratio is the lowest it has been in years. Although there has been some increase in the consumer price index lately, the increases have been centered on energy and housing costs and there are reasons to believe this accelleration will be short-lived, or are the results of statistical quirks. Energy surpluses are beginning to build again as energy producers renig on OPEC production agreements. This may limit future increases in oil prices. The rise in home prices lacks credibility given the current depressed housing market leading to an upward bias in measured inflation. On a more optimistic side, producer prices for finished and intermediate goods, as well as crude materials, continue to be moderate and give reason for optimism that the growth in prices in the future will be moderate. Wage demands have finally begun to moderate with actual wage declines being registered in some cases and capacity utilization is extremely low. These indicate that renewed growth will not be inflationary. The dollar's position on the international currency markets is currently too strong, but should trend toward an appropriate lower value in relation to other currencies as our interst rates decline. Nevertheless, its continued strength will also help keep renewed economic growth noninflationary. Finally, our current confused economic state has driven investors to cautious liquid positions so they are now poised and capable of investing in the new opportunities that would arise in a recovery.

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Figure 15
PERCENT CHANGE IN PRODUCER PRICES
AND AVERAGE HOURLY EARNINGS

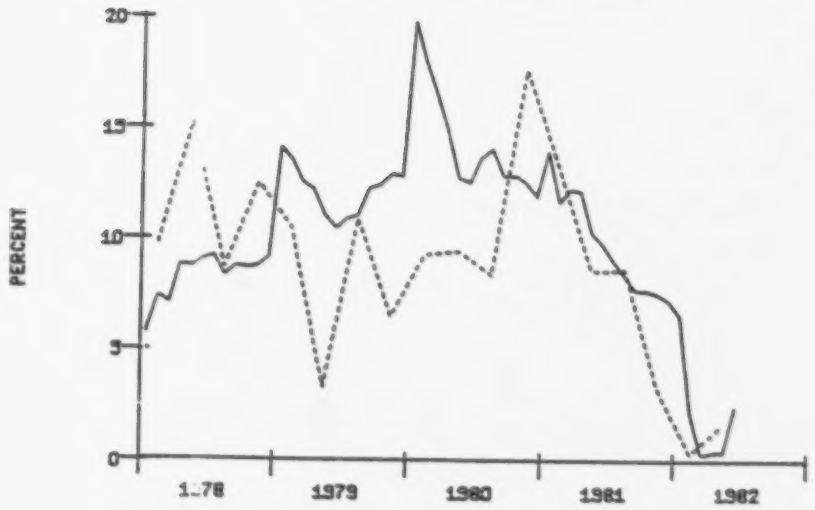

Figure 16
PRODUCER PRICES — LINE
AVERAGE HOURLY EARNINGS — DASH

CAPACITY UTILIZATION

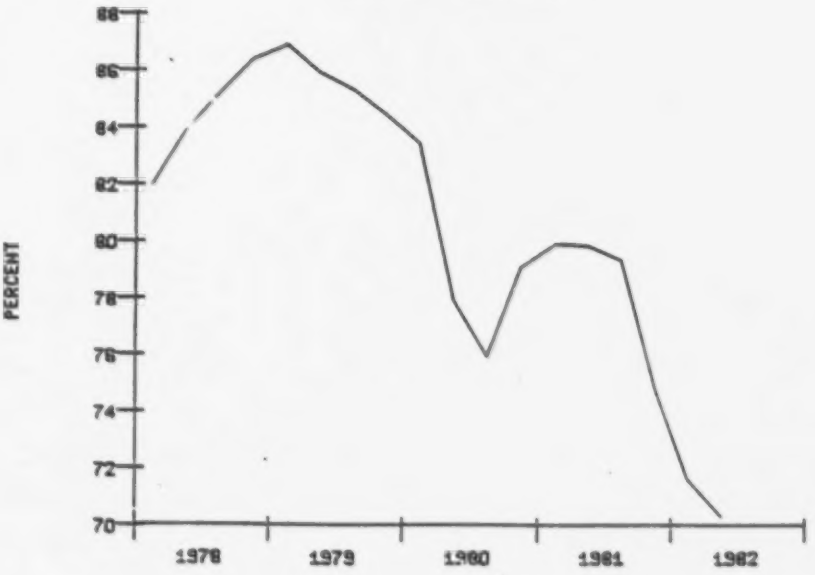

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Figure 17
U.S. TRADE-WEIGHTED EXCHANGE RATE

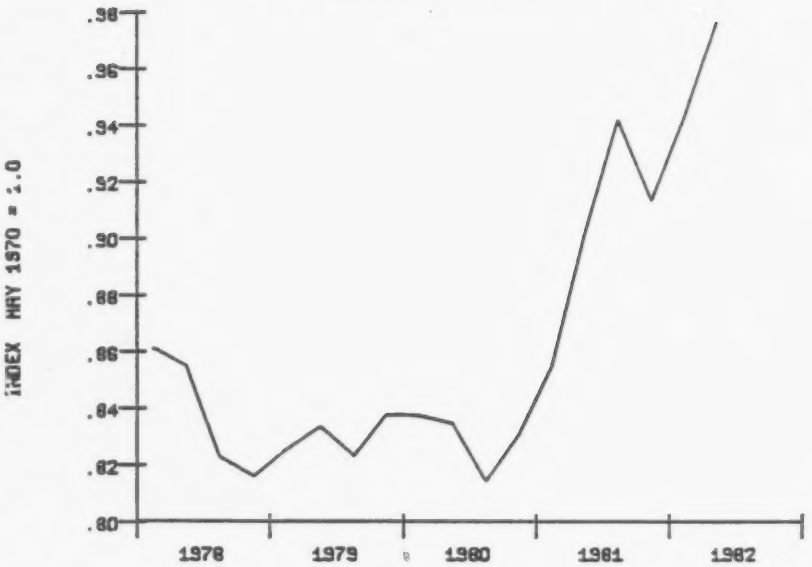
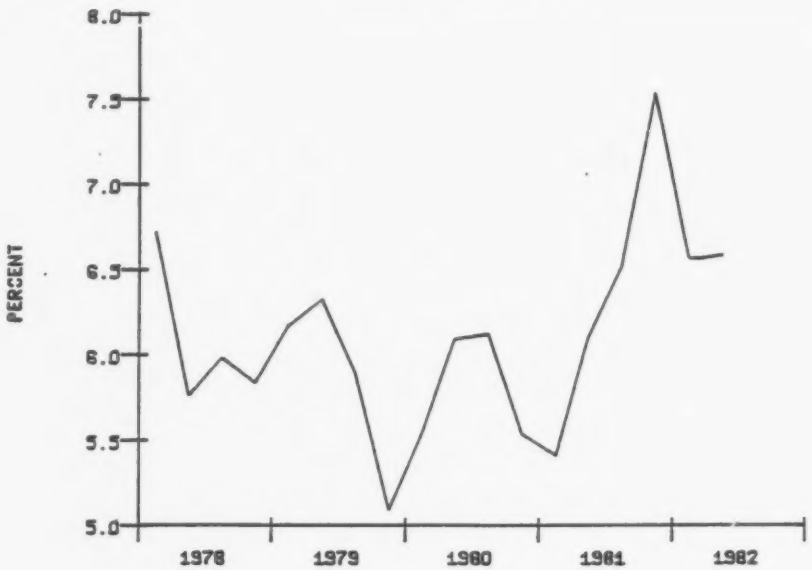


Figure 18
PERSONAL SAVINGS RATE



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However, there will be no strong and sustained recovery until the conflict between fiscal and monetary policy is removed. The economy is now at a crossroad. One road leads to economic recovery and prosperity. The other to depression as the many businesses that have survived so far begin to fail when interest rates do not come down and a recovery does not occur. The way to get on the right road is not now in dispute. Just as the national consensus two years ago was that controlling inflation was the nation's top economic priority, the consensus is now for reducing the federal deficit and borrowing, lowering interest rates, increasing employment and raising the standard of living of Americans. Although the recent budget resolution has been a step in the right direction, we agree with Federal Reserve Chairman Volcker in saying that there has to be far more done on the fiscal side in reducing deficits before a sustained and robust economic recovery can ensue. This is particularly the case if the Congressional Budget Office is correct in saying that even with the expenditure cuts and tax increases in the latest budget resolution, federal deficits will be near $140 to $155 billion over the next three years. This state of affairs simply cannot be allowed to continue.

Reduction of the federal deficit is crucial if economic disaster is to be avoided. In order to bring about this reduction, I sincerely request you give consideration to the recommendations of the NATIONAL ASSOCIATION OF REALTORS® which are:

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(1) Federal spending growth must be slowed down and reduced in all parts of the federal budget, including defense, entitlement programs, and other programs. Spending this year has overrun the commitments of the President and the Congress by double the rate compared to the last ten years. REALTORS ® have been responsible for recommending many of the cuts which were subsequently proposed by the President and enacted by the Congress last year that affected real estate and we called upon other industries to follow our example of accepting the necessary sacrifices.

(2) Deferral of tax relief planned for July 1983 and indexing scheduled for 1984 should be considered among ways to meet this need.

(3) Tax increases to discourage consumption, but not savings and investment, should be adopted along with spending reductions to help limit the deficit. REALTORS ® in the first place recommended individual tax relief should be limited to five percent across the board each year, instead of ten percent, and that the tax relief should be no larger than spending reductions to achieve a balanced budget by 1984.

(4) Finally, we recommended that Congress adopt a Constitutional Amendment to restrain the growth of federal pending and taxes in relationshiop to the growth of people's income and to restrain the growth of deficits.

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Although reduction in the federal deficit has priority over the range of policy options, improvement in the exercise of monetary policy is also of high importance. Interest rates have been extremely volatile since the Federal Reserve began targeting money growth as its primary policy objective. Also, partly as a result of this concentration on money growth targets, real interest rates have reached prohibitive levels even though inflation has sharply declined. Monetary policy improvements must address these problems of interest rate volatility, the formation of erroneous policy expectations with respect to money growth, and prohibitively high real interest rates. These will be the issues to which our recommendations on monetary policy improvements will be addressed.

With respect to the volatility of interest rates, we know that increased rate volatility is an inherent consequence of the policy technique of targeting money growth. However, the excessive magnitude of the volatility we have experienced has resulted primarily from an unnecessarily erratic growth path in the money supply. Excessive interest rate volatility is a major factor in depressing credit dependent industries. The Federal Reserve's capacity to control the supply of credit in order to produce a steadily growing money supply and stable interst rates has been demonstrated to be limited.

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Techniques of controlling the monetary aggregates have been discussed and the current policy of lagged reserve requirements has received considerable attention. Under lagged reserve requirements, required reserves are to be met with a two-week lag. That is, for average end-of-day deposits during a given seven-day computation week, reserves are to be held during a seven-day maintenance week ending fourteen days after the end of the computation week. Vault cash also is lagged two weeks. That is, vault cash held during the computation week is to be used to satisfy reserve requirements during the maintenance week two weeks later. Also, member banks could not only make up reserve deficiencies in the next reserve maintenance week, but could carry forward excesses into the next maintenance week. This last provision, which is called the carry-over provision, obviously complicated reserve accounting.

Studies by the staff of the Federal Reserve found, as reported in a staff paper to the Board of Governors on September 14, 1981, that there was widespread support for lagged reserve requirements (LRR) among depository institutions because it reduced the costs to banks of acquiring current data on their required reserved in time to adjust their reserve positions. However, LRR added to the size of these adjustments for banks clearing through the Federal Reserve. Movements in reserves over the maintenance week are typically accompanied by movements in deposits in the same direction, and with contemporaneous reserve requirements (CRR), changes in excess reserves are partially

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offset by the associated changes in required reserves. In contrast, with LRR this offset does not occur and necessitates larger reserve adjustments at the end of each maintenance week.

The study continues by saying that reflecting these additional adjustments, which are made in part via the federal funds transactions and member bank borrowing, LRR added somewhat to pressures for fluctuations in the federal funds rate near the end of the maintenance period. Accordingly, the volume of system defensive open market operations needed to constrain settlement day fluctuation in the funds rate increased.

Finally, the staff report says LRR has no discernable impact on the precision of monetary control under a federal funds rate operating target, which relied mainly on influencing money demanded. However, under a reserve operating target, LRR impairs short-run monetary control by delaying the response of money market interest rates to changes in the quantity of money demanded. For example, with fixed weekly targets for reserves, the switch to CRR would speed up the impact of changes in money or required reserves and interest rates by two weeks. Empirical evidence comparing the relation beteen reserves and money in the years before and after the switch to LRR suggested that month-to-month monetary control could be noticeably improved under reserves targeting by a return to CRR.

Also included in the paper were the recommendations of the staff which state that the return to CRR would entail substantial start-up and continuing costs for both depository institutions and the Federal Reserve System. It would also be considerably more complex administratively, particularly for reserve pass-through relationships, than the present lagged reserve

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requirement system. Nonetheless, the staff is of the view that a CRR system as proposed in their memorandum is operationally feasible. With regard to the benefits of such a system, CRR would offer the potential for improved month-to-month control over the monetary targets, though the monetary control gains would be appreciably less over longer periods, say a three to six month horizon.

The staff went on to recommend a CRR system with the following features:

(1) Only depository institutions reporting deposits weekly would be subject to CRR.

(2) CRR would apply only to transactions deposits; reserve requirements on other reservable liabilities would continue to be met on a lagged basis.

(3) Vault cash holdings in a previous period would continue to be counted as reserves in the current maintenance period.

(4) The computation period for transactions balances would end on Monday, two days before the end of the maintenance period.

(5) Both the computation and maintenance periods would be two weeks in length rather than the present one week. However, for purposes of the monetary statistics and the estimation of required reserves, deposits would continue to be reported on a weekly basis.

(6) The current carryover limit of plus or minus two percent of daily average required reserves would seem appropriate.

The NATIONAL ASSOCIATION OF REALTORS® endorses the recommendations of the Federal Reserve staff and requests that this committee encourages the Federal Reserve to set a suitable date for implementation.

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The unusual economic conditions and regulatory, attitudinal, and technological evolution, have all made the art of monetary management very difficult. The current economic conditions have confused the expectations of investors and consumers and they have responded to this by holding large amounts of liquid assets. New financial instruments that have been developed having characteristics of both transaction accounts and savings accounts are now widely available to the public, and current conditions are causing them to use these accounts in new ways. Since the monetary aggregates that are targeted for policy purposes are defined on the basis of accounts that segregate the transaction and saving functions, setting policy based on those aggregates is sometimes difficult to sustain and more importantly for short run interest rates, difficult to interpret.

Chairman Volcker has testified, "the great bulk of the increase in M1 during the early part of the year--almost 90 percent of the rise from the fourth quarter of 1981 to the second quarter of 1982--was concentrated in NOW accounts, even though only about a fifth of total M1 is held in that form." He also states, "In contrast to the steep downward trend in low interest savings accounts in recent years, savings account holdings have stabilized or even increased in 1982, suggesting the importance of a high degree of liquidity to many individuals in allocating their funds. A similar tendency to hold more savings deposits has been observed in earlier recessions."

In the Federal Reserve's Midyear Monetary Policy Report to Congress it states, "Looking at the components of M2 not also included in M1, the so-called non-transaction components, these items grew at a 10-3/4 percent annual rate from the fourth quarter of June 1982. General purpose and

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broker/dealer money market mutual funds were an especially strong component of M2, increasing at almost a 30 percent annual rate this year. Compared with last year, however, when the assets of such money funds more than doubled, this year's increase represents a sharp deceleration." Money market mutual funds are similar to NOW accounts in that they have characteristics of both transactions and savings accounts. The report continues, "after declining in each of the past four years--falling 16 percent last year--savings deposits have increased at about a 4 percent annual rate thus far this year. This turnaround in savings deposits flows, taken together with the strong increase in NOW accounts and the still substantial growth in money funds, suggests that stronger preferences to hold safe and highly liquid financial assets in the current recessionary environment are bolstering the demand for M2 as well as M1."

This increased demand for M1 and M2 affects the ratio of these aggregates to gross national product. This has policy implications because the determination of whether money growth is excessive or constraining is based on an assumed ratio of the money aggregate to gross national product. An assumed velocity if you will. That is how the target ranges are decided upon.

Chairman Volcker stated, "the Committee (Open Market Committee) was sensitive to indications that the desire of individuals and others for liquidity was unusually high, apparently reflecting concerns and uncertainties about the business and financial situation," he also states, "Judgments on these seemingly technical considerations inevitably take considerable importance in the target-setting process because the economic and financial consequences (including the consequences for interest rates) of a particular

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M1 or M2 increase are dependent on the demand for money." In other words, the determination of whether money is tight or loose at a particular level depends on the velocity to a considerable extent. In reference to Federal reserve policy early this year when money growth was well above target, Chairman Volcker states "In the light of the evidence of the desire to hold more NOW accounts and other liquid balances for precautionary rather than transaction purposes during the months of recession, strong efforts to reduce further the growth rate of the monetary aggregate appeared inappropriate." He continued, "Moreover--and I would emphasize this--growth somewhat above the target ranges would be tolerated for a time in circumstances in which it appeared that precautionary or liquidity motivations, during a period of economic uncertainty and turbulence, were leading to stronger than anticipated demands for money." The Chairman also stated that the behavior of velocity and interest rates weighed heavily in this policy determination.

The problem with this is that just as the Federal Reserve's policy decisions on acceptable money growth is complicated by the velocity problem, it is doubly difficult for the members of the financial community who have recently had to trade based on expectations of Federal Reserve policy, to form expectations on that policy. The importance of Federal Reserve policy is indicated by the attention that is paid to the weekly release of the monetary aggregates. This attention has been so great that the expectations formed by them have been of some concern at the Federal Reserve. Recently, the Federal Reserve has said it intends to counter this by averaging the weekly numbers to reduce their volatility and hopefully their importance in forming expectations about Federal Reserve policy.

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It is our feeling that this is the exact opposite of the approach the Federal Reserve should take to this problem. Instead of trying to reduce the information available to the financial markets for forming expectations on Federal Reserve policy, they should be increasing it. During the early part of this year expectations of eminent tightening of money growth and higher interest rates were formed because of persistent money growth above Federal Reserve targets. The expectations of higher interest rates inflated long term interest rates and drove long term borrowers into the short term market which helped inflate those rates as well. The statements of Chairman Volcker on the policy considerations of the Open Market Committee at the time indicate that these expectations were overly pessimistic. When the Open Market Committee modified its policy due to velocity and liquidity preference changes, the modification was not effectively communicated to the financial markets. This resulted in erroneous expectations and probably resulted in interest rates being higher than they would have been if policy expectations had been more accurate.

We believe the Federal Reserve should implement measures to reduce erroneous policy expectations in the financial markets particularly as they result from short and medium term policy modifications by the Open Market Committee. Just as the Federal Reserve periodically reports to Congress on Federal Reserve policy and responds to their questions, they should perform a similar function for members of the financial markets. What we propose is that the Federal Reserve hold monthly public briefings in New York and Washington for financial market officials and the public whose opinions weigh heavily in the formation of investor expectations. These briefings should be

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held soon after each meeting of the Open Market Committee and should be conducted by the Federal Reserve Chairman, a Federal Reserve Governor, or possibly a member of the Open Market Committee. The subject of the meetings would be the short-run targets for money growth of the Committee. Also discussed would be factors which could cause variance from the Committee's targeted growth path and what the likely Committee response to those variances would be.

It is our feeling that such briefings would reduce much of the uncertainty in the financial markets with respect to Federal Reserve policy for management of money growth. This would certainly reduce the impact of volatile movements in the money stock measures on interest rates and could, therefore, reduce the large risk premiums that are currently imbedded in those rates. We strongly encourage this committee to request that the Federal Reserve consider this proposal and report on its feasibility.

Finally, I would like to address the problem of sustained high real interest rates that are enduring despite our current reduced level of inflation. To be sure, the primary policy measure to be taken to remedy this problem is to reduce excessive borrowing by the Federal Government. However, the Federal Reserve must also have a responsibility to help maintain real interest rates at levels necessary to promote growth in output and employment with low inflation and stable prices. The economy, though currently languishing in a deep recession, is now poised for a recovery. With wage growth moderating, capacity utilization low and consumer liquidty high, we now have our best opportunity to initiate a sound recovery with low rates of inflation. Our priorities must now turn to this recovery which will bring the

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country back to economic prosperity. Monetary policy must do its part to help bring the recovery about, and to continue to play a role in sustaining strong economic growth by keeping real interest rates from reaching excessive levels.

The NATIONAL ASSOCIATION OF REALTORS® has in the past and continues to support the Federal Reserve's policy of gradual reduction in the rate of growth of money and credit in order to reduce inflation. However, we would like to additionally recommend at this time that this committee consider requiring the Federal Reserve through amendments of the relevant sections of the Federal Reserve Act, to utilize the policy tools at its disposal to maintain real short-term interest rates at historic evels (3 to 4 percent) during any periods of time that the long and short-term monetary monetary growth targets of the Federal Reserve are being met.

The adoption of this proposal would insure that during periods where low inflation and high real interest rates exist while money growth is within the short and long run target ranges of the Federal Reserve, monetary policy would shift in priority from restraining inflation by reducing money growth to encouraging economic growth and higher employment by reducing real interest rates. It is our feeling that current Federal Reserve policy has not been aggressive enough in helping to bring economic recovery even though inflation is low and money is growing at acceptable rates. Our recommendation will ensure that the appropriate monetary policy priorities are being exercised relative to the prevailing economic conditions.

Consistent with this idea of matching policy priorities with prevailing economic considerations, it is our feeling that the Federal Reserve should review its short run monetary growth targets given the high liquidity

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preferences of the public and the resulting low money velocity. Considering also the low current rates of inflation, the Federal Reserve can now safely allow money to grow at least one percentage point above the current target range for the remainder of this year and through 1983. The result of this would be to further lower interest rates and relieve some of the pressure from interest sensitive industries and thrift institutions. A more rapid economic recovery would surely result from this policy modification. Unfortunately, however, this policy and other Federal Reserve policies to lower real interest rates can not be expected to be maintained unless runaway Federal deficits are brought under control and reduced.

In conclusion, I would like to say that the Federal Reserve must be commended for its effectiveness in reducing inflation in this country. However, the execution of Federal fiscal and monetary policy must be improved and made consistent if we are to have a strong sustained recovery and balanced economic growth with high employment, low inflation, and an increasing standard of living for all Americans. It is to this end that our reocmmendations are here presented to this committee.

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Interest Rates and Economic Activity

by

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Thirty-one senators and 66 members of the House of Representatives have introduced legislation into the US Congress that would require the Board of Governors of the Federal Reserve to "establish yearly targets for positive real short-term interest rates, consistent with historic levels and with sustained economic growth and stable prices."

One of the best ways to appreciate the merit of this proposal is to compute a wage adjusted interest rate. This is done in Table 1 by subtracting the growth rate for adjusted hourly earnings in the private nonagricultural economy from the federal funds rate--a short term interest rate that is paid by commercial banks when they borrow from each other on a day-to-day basis to secure additional funds.

It will be noted that when the federal funds rate has been 1.5 percentage points or more above the average growth rate for adjusted hourly earnings (as was the case on the average in 1969, from 1973-74 and from 1979-81), the following year growth rates for real GNP either sunk to recessionary lows or increased at a lack lustre rate of less than two percent per year. When the federal funds rate was allowed to drop more than half a percentage point below the earnings growth rate (1967, 1971-72 and 1975-76), on the other hand, the following year growth rates for real GNP turned out to be unsustainably high and a prelude to serious inflation.

These data would strongly suggest that interest rates can influence economic activity and that there might be a great deal of social merit in

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requiring the Federal Reserve to do a better job of stabilizing real interest rates. Perfect stability would not be desirable, however. What is needed is a more measured use of fluctuating real rates to reward consumers and producers for the enlightened restraint that is needed to insure a further reduction in the growth of prices and wages.

Rather than disavow any responsibility for high interest rates and fluctuations in economic activity, I believe that the Fed should accept the role of a tough disciplinarian and endeavor to strike a social bargain with business, labor and government that might eliminate the fear of recurring inflation and insure a more vigorous recovery from the most prolonged period of economic stagnation since the great depression of the 1930s.

Rapid increases in the inflation rate can be triggered by wars, commodity shortages and too much fiscal stimulation on the part of the federal government. The most important determinent of the inflation rate in the long run, however, is the growth of labor compensation.[1] During the 16 year period from 1966-81, for example, the inflation rate for the CPI was only slightly less, on the average, than the growth rate for adjusted hourly earnings in column (2) of Table 1.

The growth of hourly earnings almost doubled from 4.3 percent in 1966 to 8.4 percent in 1975. The severe recession of 1975 helped to slow the earnings growth rate to 7.2 percent in 1976. All of this gain was lost, however, in the ensuing business expansion.

[1]This point has been developed more fully by the author in "Inflation and the Valuation of Zero-Coupon Bonds," Journal of Pension Planning and Compliance, July 1982, pp. 279-83, and in "Money Versus a Supply-side View of the Inflationary Process," a paper to be included in the Joint Economic Committee Hearings on High Interest Rates, Monetary Policy, and the Federal Reserve, June 2, 1982.

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In October 1979 the Federal Reserve allowed short term interest rates to soar to unprecedented levels in a determined effort to substantially moderate price and wage inflation. High rates were needed, in part, to offset the inflationary psychology and speculative behavior engendered by four years of excessively low real rates of return on financial assets.

Tight money does cure inflation but with a long lag and at a high cost in terms of foregone income and rising unemployment. It was not until a second recession in less than two years that noticable progress was made in moderating inflation.

The GNP deflator has now slowed from an annual increase of 9.4 percent in 1981 to five percent in the first half of 1982. Wage inflation has slowed from a record 9.2 percent to about six percent at the present time. Short term interest rates have also declined by several percentage points but are still very high in relation to the growth of prices and wages.

In exchange for greater fiscal responsibility on the part of government and the enlightened moderation on the part of business and labor that is needed to insure a further reduction in the growth of prices and wages, the Fed should be encouraged to supply banks with sufficient reserves to gradually reduce the federal funds rate to the point where it is again about equal to the growth of hourly earnings. It should also be permitted to promptly reverse the trend toward easier credit, however, if there is bad faith on the part of those parties that are most responsible for inflationary pressures. We do need a lower interest rate and a stabler monetary policy. The costs of bringing the inflation rate down have been so high and our prior success at keeping inflation under control during business expansions so poor, however, as to indicate a continuing need for a Board of Governors of the Federal Reserve with a capacity and willingness to assume the role of a tough disciplinarian.

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Table 1

The Federal Funds Rate, The Growth Rate for Adjusted Hourly Earnings in Private Nonagricultural Industries and the Following Year Growth Rates for Real GNP, 1966-81

	Federal Funds Rate	Earnings Growth Rate	Real Wage Adjusted Interest Rate[a]	Following Year Growth Rate for Real GNP
	(1)	(2)	(3)	(4)
1966	5.1	4.3	.8	2.7
67	4.2	5.0	-.8	4.6
68	5.7	6.1	-.4	2.8
69	8.2	6.7	1.5	-.2*
70	7.2	6.6	.6	3.4
71	4.7	7.2	-2.5	5.7
72	4.4	6.2	-1.8	5.8
73	8.7	6.2	2.5	-.6*
74	10.5	8.0	2.5	-1.1*
75	5.8	8.4	-2.6	5.4
76	5.0	7.2	-2.2	5.5
77	5.5	7.6	-2.1	5.0
78	7.9	8.1	-.2	2.8
79	11.2	8.0	3.2	-.4*
80	13.4	9.0	4.4	1.9*
81	16.4	9.2	7.2	-1.0*[e]

[a] Column (1) minus Column (2).

[e] An estimate

* Growth rates for real GNP following real wage adjusted interest rates in excess of one percentage point.

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